

LIFE'S EASY  
WITH PFC  
COMPUTER  
STATIONERY

PFC Computer Formatic  
Vinehill Lane, Farnham  
Surrey GU10 3HN  
021 551 3301

## Attempt to curb takeover spree in US

THE US Justice Department is bringing legislation before the new session of Congress which could put a damper on the fever of bid activity among US companies, thwarting the ambitions of big European companies like GEC, Siemens and Philips, and also curbing the takeover spree at major US companies like Xerox and ITT.

The suggestion is that mergers between two companies with either combined assets or combined annual sales of more than \$2,000 million, where both have assets or turnover of over \$100 million, should be banned.

Deals just completed or in progress which would have fallen foul of the measure in-

clude GEC's proposed acquisition of office equipment manufacturer A. B. Dick, while ITT's acquisition of Quine would have been on the borderline, since the latter was mainly in the defence field, while Bunker Ramo sales are about \$341 million.

Although passing of the legislation, at least in its present form, is by no means assured, the threat that it may be enacted is likely to lead to a further upsurge of bids from the giant US and European corporations in an effort to beat the ban. It could also lend weight to speculation that GEC Cross, GEC's company hunter in the US, may shortly resign from the small San Diego subsidiary which he heads.

SPECIALIST training in microelectronics is essential, not just for engineers and technicians but also for managers, administrators, and office staff, according to Gordon Oakes, Minister for Education and Science. He reiterated the government's commitment to improving teaching in this area, initially by a national programme to improve awareness in schools and colleges.

Oakes was speaking at a conference at Middlesex Polytechnic on Technological Change and the Future of Work. He said the government was already taking steps to improve the supply of teachers in mathematics, science, craft design, and technology, and was urgently studying the need for in-service training to improve, among other things, teachers' appreciation of the potential of microelectronics.

### Equal rights

HERE is a danger that women employees can be discriminated against by firms introducing new technology, according to the technical staff union, TASS. The union, which is launching a campaign for equal opportunity in training, claims that employers can prefer to retain men rather than women because women are less likely to stay in their jobs.

### LACES at Gatwick

THE extension of the London Airport Cargo EDP Scheme, LACES, to Gatwick Airport (CW March 9, 1978) is now complete. LACES facilities include online duty and revenue calculation for HM Customs, and its users at Gatwick include four air freighters and six forwarding agents.

AS part of a co-ordinated plan to win pay parity with white-collar engineers, computer staff in the Post Office's data processing service staged a one-day unofficial strike on Monday at PO head offices in London and Cardiff.

About 600 staff, members of the SCPS, which represents executive grade civil servants, were involved in the stoppage.

Their successful action consisted mainly of halting the flow of customer record information and mail into the offices. PO engineers entering the Kensington computer centre in London also had to face SCPS pickets.

"We are in discussion with the SCPS on their claim," he said.

The SCPS spokesman explained: "The type of action we could take would be designed not to hurt the customer, but rather the cash-flow of the PO."

"There are many ways to do this. It can be by stopping the input, output or processing of data. Key areas are stock control, Giro, and telephone billing systems. There may even be short stoppages on the Prestel service."

"After our first announcement that we intended to take action in support of our claim, the PO stated that bonus payments

would not be made this year," said an SCPS spokesman. "On January 10, we blacked the operation of the Giro information management system at the Boots centre. Because of this, the bonuses have been reinstated, but the situation is very changeable."

Commenting on the action by the men, a PO spokesman said that it would have "a comparatively minimal effect on operations," while admitting that similar, but more constant, action in 1974 did affect the corporation's cash-flow.

"We are in discussion with the SCPS on their claim," he said.

The SCPS spokesman explained: "The type of action we could take would be designed not to hurt the customer, but rather the cash-flow of the PO."

"There are many ways to do this. It can be by stopping the input, output or processing of data. Key areas are stock control, Giro, and telephone billing systems. There may even be short stoppages on the Prestel service."

On the question of System X development, there is a possibility of action being taken here too, although it has not been designated as a "key" area, but rather one that acts as a good example of what the SCPS members are fighting for.

"We have about 40 of our programmers working on System X development," said the SCPS spokesman, "and some of them teach Coral and PL/I programming to the engineers. This doesn't go down very well, as the engineers earn so much more."

"All that we are seeking is for proposals to be submitted that will give us parity with the engineers and allow us to receive the extra money in July this year when they get their pay rise."

A DISAGREEMENT has blown up between Digital Equipment Corp and IBM over the definition of data processing.

IBM believes that AT&T's proposed Advanced Communications Service (CW, October 12, 1978) will take the US telecommunications giant into the data processing business. DEC has now written to the Federal Communications Commission supporting AT&T's view that since ACS only alters the message format and not its content, no data processing is involved.

Both companies believe that AT&T should be allowed to go ahead with the service. However, IBM believes that the service should be offered in free competition with other data

services companies. DEC believes that, as a telecommunications service, ACS should be regulated by the Federal Communications Commission.

DEC is expected to seek clearance for the 1725 and the 1730 initially, to avoid having the whole deal held up by delays on the 175.

BURROUGHS' answer to IBM's System 38, which as forecast (CW, December 21) is three new models in the B1800 line, are announced in the UK today (Thursday). They range from a small-scale B1815 to a dual processor B1885 offering 1.5 times the performance of the previous biggest model.

SYSTEM X, the Post Office's future range of digital switching equipment, will be marketed abroad by a new company set up jointly by the Post Office, Plessey, GEC and STC. The new company is likely to have a share capital of £100,000 and is aiming for a turnover of £100 million a year, an estimated 10% of the available market outside the US and Europe.

A PLAY entitled "When my Chip comes in" has been put together by the Covent Garden Community Theatre, and will be presented in pubs and fringe theatres in February and March. The play concerns a businessman's efforts to install microprocessors in a fish-cutting factory and dominate the world. First performances are in London the week of February 8. Further information and arrangements for other bookings from 01-800 0617.

ATLANTIC FOR SALE OR LEASE

370/145.102 - 2 channel, fully featured

370/138.100 - fully featured inc. IFA

The above machines are U.K. language and are available ex-stock on low cost flexible leasing terms.

Please call us for prices

STOP PRESS WE HAVE MOVED TO LARGEST NEW QUARTERS TO GIVE EVEN BETTER SERVICE

Telephone 01-504 9520 CRANFIELD PUTS THE GUST ON THE GUST

A MEMBER OF THE CRANFIELD GROUP OF COMPANIES

Printed in Great Britain by O.B. Limited, Shoreham, Sussex, BN4 1JL Tel: 0203 223344

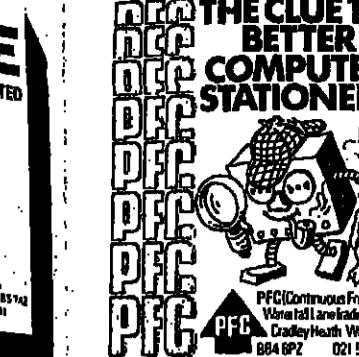
Published by IPC Business Press Ltd, Dorset House, Stamford Street, London SE1 4LA

Price 18p

## SAFE COMPUTING LIMITED

The Safe Way to all your computing requirements

Established in Commercial Systems Division, 1971. Head Office: 101 Highgate Hill, London NW1 8QH. Tel: 01-580 2211. Telex: 221142. Fax: 01-580 2211. E-mail: 101highgate@btconnect.com



## GET THE CLUE TO BETTER COMPUTER STATIONERY

Safe Computing Limited

PFC Computer Formatic  
Vinehill Lane, Farnham  
Surrey GU10 3HN  
021 551 3301

Number 637

Thursday, January 25, 1979

Price 18p

### NEWS IN BRIEF

#### Training in micros vital

SPECIALIST training in microelectronics is essential, not just for engineers and technicians but also for managers, administrators, and office staff, according to Gordon Oakes, Minister for Education and Science. He reiterated the government's commitment to improving teaching in this area, initially by a national programme to improve awareness in schools and colleges.

Oakes was speaking at a conference at Middlesex Polytechnic on Technological Change and the Future of Work. He said the government was already taking steps to improve the supply of teachers in mathematics, science, craft design, and technology, and was urgently studying the need for in-service training to improve, among other things, teachers' appreciation of the potential of microelectronics.

HERE is a danger that women employees can be discriminated against by firms introducing new technology, according to the technical staff union, TASS. The union, which is launching a campaign for equal opportunity in training, claims that employers can prefer to retain men rather than women because women are less likely to stay in their jobs.

#### LACES at Gatwick

THE extension of the London Airport Cargo EDP Scheme, LACES, to Gatwick Airport (CW March 9, 1978) is now complete. LACES facilities include online duty and revenue calculation for HM Customs, and its users at Gatwick include four air freighters and six forwarding agents.

## Pay parity sought in PO strike



### Computastars is back!

CALLING all computer athletes! Computastars for 1979 is under way. Following the success last year of this nationwide DP super sports contest, the event is to be run again, with the final at Crystal Palace on September 28. Organised by Gordon Cairns, of Computastars Ltd, the event is co-sponsored by Wright Air Conditioning and Computer Weekly.

At least eight regional heats are planned. These will be at Birmingham, Bristol, Leeds, Liverpool, Norwich and in Scotland, with two for the London and south east, one in North London, and the other at Crawley, Sussex. If there is sufficient demand, other regional heats will be organised.

Detailed rules will be announced shortly, but, in the meantime, anyone considering entering the competition or wishing to offer help with the organisation should contact Gordon Cairns, at Computastars, 117a High Street, Croydon, CR9 1JL.

● Our picture will bring back memories of the 1978 final. Gordon Cairns hands over the women's team trophy to Bente Andersen, of the SAS team. Looking on is Colin Brook, managing director of WAC's London company.

It depends what you mean by data processing . . .

A DISAGREEMENT has blown up between Digital Equipment Corp and IBM over the definition of data processing.

IBM believes that AT&T's proposed Advanced Communications Service (CW, October 12, 1978) will take the US telecommunications giant into the data processing business. DEC has now written to the Federal Communications Commission supporting AT&T's view that since ACS only alters the message format and not its content, no data processing is involved.

Both companies believe that AT&T should be allowed to go ahead with the service. However, IBM believes that the service should be offered in free competition with other data

services companies. DEC believes that, as a telecommunications service, ACS should be regulated by the Federal Communications Commission.

DEC is expected to seek clearance for the 1725 and the 1730 initially, to avoid having the whole deal held up by delays on the 175.

BURROUGHS' answer to IBM's System 38, which as forecast (CW, December 21) is three new models in the B1800 line, are announced in the UK today (Thursday). They range from a small-scale B1815 to a dual processor B1885 offering 1.5 times the performance of the previous biggest model.

SYSTEM X, the Post Office's future range of digital switching equipment, will be marketed abroad by a new company set up jointly by the Post Office, Plessey, GEC and STC. The new company is likely to have a share capital of £100,000 and is aiming for a turnover of £100 million a year, an estimated 10% of the available market outside the US and Europe.

A PLAY entitled "When my Chip comes in" has been put together by the Covent Garden Community Theatre, and will be presented in pubs and fringe theatres in February and March. The play concerns a businessman's efforts to install microprocessors in a fish-cutting factory and dominate the world. First performances are in London the week of February 8. Further information and arrangements for other bookings from 01-800 0617.

STOP PRESS WE HAVE MOVED TO LARGEST NEW QUARTERS TO GIVE EVEN BETTER SERVICE

Telephone 01-504 9520 CRANFIELD PUTS THE GUST ON THE GUST

A MEMBER OF THE CRANFIELD GROUP OF COMPANIES

Printed in Great Britain by O.B. Limited, Shoreham, Sussex, BN4 1JL Tel: 0203 223344

Published by IPC Business Press Ltd, Dorset House, Stamford Street, London SE1 4LA

Price 18p

## Services business up 26%

### Strike threat to Access

THREATENED industrial action by about 200 computer staff could soon disrupt the operation of the Access Joint Credit Card Monitor statistics on the computer services industry, from the Department of Industry.

The total value of billings by the industry in the second quarter of 1978 was nearly \$1 billion, compared with just over \$76 million in the first quarter and less than \$64 million a year before.

However, the employment figures included in the statistics show that the total number of people in the industry rose by less than 7% over the 12-month period despite the 26% increase in business. The total number of people employed in the second quarter of 1978 was 21,101.

The fastest growing area was foreign business, which rose by nearly 40% in value over the 12-month period. But exports still represented a small proportion of total business, standing at £4,618,000 in the second quarter of 1978.

● PO operators strike, back page

●

A MEMORIAL fund for the widow of the late John Miller Kirkpatrick has been started by Mike Sterland, managing director of Apple UK distributor, Personal Computers. Kirkpatrick, 32, who died of cancer just before Christmas, was managing director of Bywood Electronics, and designer of the Scrump range of microcomputer kits. Contributions should be sent to Account Number 7213071, Lloyds Bank, 32 Grosvenor Place, London W1.

THE Prime Minister believes that the negative employment impact of microelectronics is likely to be "very short-term" but in the long run "electronics is the best growth prospect for our industry" and within two decades all other industries would embrace electronics.

The Prime Minister and Hammond were among speakers in London this week at a TUC Industrial Strategy Conference. Callaghan told the conference that the two major challenges facing the country were to control inflation through controlling costs and through increased productivity. And he said that he wrote the key to improved pro-

ductivity and unless British industry adopts the new technology the whole country could go out of business.

Pointing to the fact that about 700,000 jobs had been created in California's Silicon Valley, the Prime Minister said, "With our highly respected software writers and design engineers Britain could become the Silicon Valley of Europe."

He admitted that while the government had recently invested a great deal of money in

● Turn to Page 48

●

Callaghan . . . "governments can do nothing..."

●

Callaghan . . . "governments can do nothing..."

●

Callaghan . . . "governments can do nothing..."

●

Callaghan . . . "governments can do nothing..."

●

Callaghan . . . "governments can do nothing..."

●

Callaghan . . . "governments can do nothing..."

●

Callaghan . . . "governments can do nothing..."

●

## COMPUTERVIEW on Planning for Automation Conference

'The destruction of jobs in the UK has been caused by a failure to invest in new equipment... we must reject the new pessimism... there is no merit in doing things less efficiently... unemployment can be caused by neglecting technology...'.

With thoughts such as these, Energy Minister Tony Benn last week provided an optimistic, forceful start to the Planning for Automation conference at the Polytechnic of the South Bank in London.

Unfortunately, by the end of the day the conference had run into the same fog of fear and confusion which has characterised much of the public debate on the "micro revolution".

The optimistic view of the impact of technology was expressed by Tory MP Ian Lloyd,

## Micro fears blur the way ahead



Tony Benn  
"We must reject the new pessimism."

tor of the white-collar union ASTMS, who said that Information technology was unique because it was so all-pervading and would affect a wide range of industries and jobs at the same time. It would cause the elimination of certain jobs and a reduction in the overall demand for workers, particularly unskilled and clerical staff.

His view was backed by speakers from the audience who quoted examples such as the halving of the number of typists employed by Bradford Corporation after the introduction of word processing equipment, to show that people were already losing jobs because of new technology.

Sherman warned that he believed the government and Civil Service were being too complacent about the social impact of automation, as indicated by the Think Tank report.

As the day progressed, the audience divided into two camps, with one side stressing the dangers of high unemployment and the other side the inevitability, in a competitive world, of having to adopt the growth of human knowledge.

However, the potential negative aspects of increased automation struck a generally more responsive chord among the audience of almost 150, as it has done in the public media.

The dangers of the "micro" revolution were highlighted by Barrie Sherman, research director

## COMPUTER WEEKLY

Vol. 26 No. 637  
Thursday, January 26, 1979

IPC Electrical Electronic Press Ltd,  
Dover House, Stamford Street,  
London, SE1 9LU.  
Telephone: 01-831 8000.  
Telex: 28137 EIPRNS G

Published weekly on Thursday.

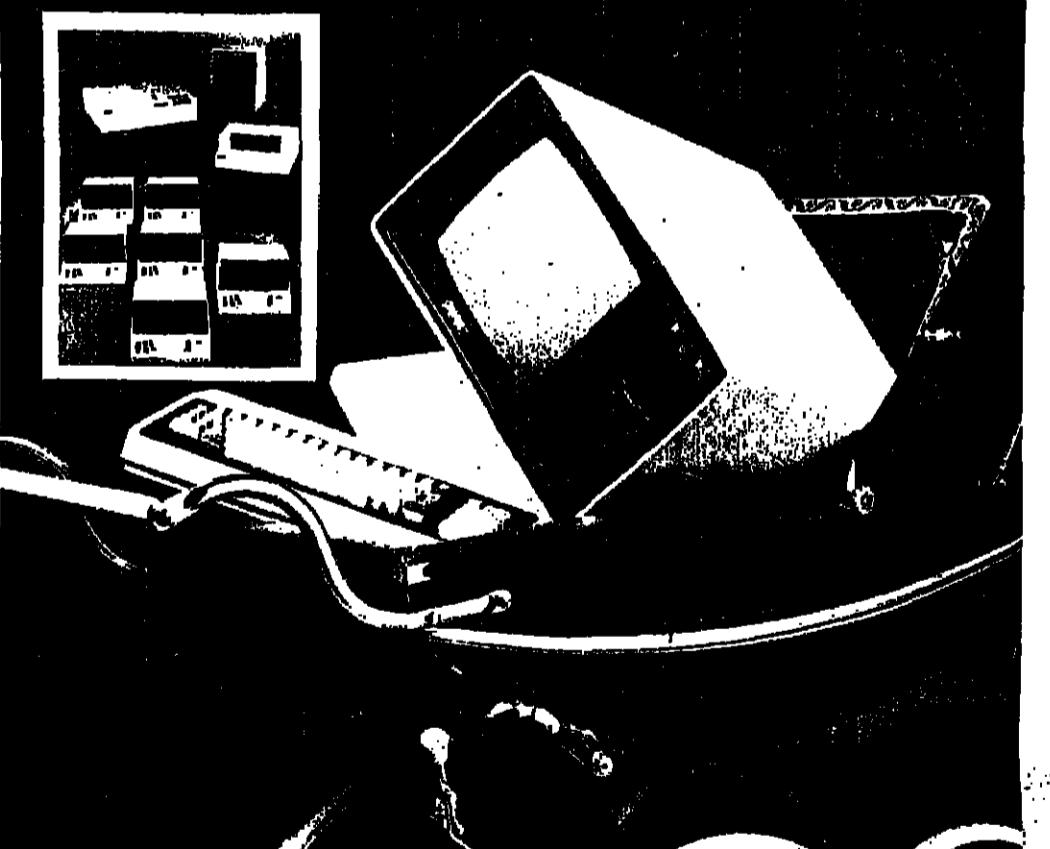
Registered at the Post Office as a newspaper. Price per copy 18p

IPC Business Press Ltd 1978.

Computer Weekly has a circulation each week of over 22,000 including the best fully regulated circulation in the UK. The International edition, which is published 10 times a year, has a circulation of over 94,000.

ISSN 0010-478

## FAMILY PLANNING



### The Simple Solution—QANTEL

Qantel is a planned family of computer systems that solves the problems of a wide variety of large and small organisations. The modular simplicity of its hardware, plus a large range of standard software packages, makes it ideal for both the first-time and experienced computer user. But Qantel is cleverer than that.

There are three series of Qantel systems—all designed to grow using simple field upgrades to meet the expanding needs of today's businesses.

From the simplicity of the 200 Series—containing less than £7,000

£1,000 worth of software, to the largest multi-terminal 100 Series with its 65K bytes of user memory and 800M bytes of disc storage, they all use the same software investment. Qantel software is never wasted.

What's more, Qantel's REPORT GENERATOR package has been designed to allow management to produce any report it wants when it wants—without the need for any specialist training.

In short, Qantel represents the very best aid to managers in the running of their businesses.

With this sort of background and with everything—hardware, software, support—supplied by just one company (including maintenance anywhere in the UK), Qantel is destined to become a very powerful planned family.

Qantel is a planned family of computer systems—all designed to grow using simple field upgrades to meet the expanding needs of today's businesses.

General Computer Systems (UK) Limited, Otton Park, 228-238 Northfields Avenue, London W13 8QH. Telephone: 01-579 9401

Regional Offices: Birmingham, Manchester, Edinburgh

Please send me details of the Qantel planned family of computer systems.

NAME \_\_\_\_\_  
POSITION \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_

P.G.L. Young Adventure  
428 Station Street, Runcorn, Cheshire, WA7 4AH.  
Telephone: 0925 421177  
24 HOUR SERVICE

SCS TELCO COMPUTER SYSTEMS

## CTL upset over withdrawal of tender for HSE mini network

And so, stoked by the same simplistic fears and prejudices which the mass media love to ignite, the complex issues surrounding information technology seem to have become inexorably drawn into the same maelstrom of self-interest politics as the country at large.

But—as both Benn and Lloyd, from their opposing red and blue corners, pointed out—the problems posed by information technology are only likely to be solved by finding new social and political structures to bring the drive of technology under human control.

Benn said it was all about finding means of spreading and increasing grassroots democratic involvement to take power away from the elite, the

who said the micro was "the largest, finest gift horse we have ever had a chance to look in the mouth." It would stop people from being forced into boring work, and opened up new areas of opportunity for generating new industries and providing a "reinforcement of intellectual power".

And Benn said that information technology could provide a means of capitalising on "our one natural resource that will never be depleted—human knowledge." Computing, he said, could be of benefit to mankind by providing access to the growth of human knowledge.

However, the potential negative aspects of increased automation struck a generally more responsive chord among the audience of almost 150, as it has done in the public media.

The dangers of the "micro" revolution were highlighted by Barrie Sherman, research director

## NEWS IN BRIEF

### Progress in ICL dispute

DESPITE the fact that tenders for a proposed Health and Safety Executive minicomputer network are expected in "the near future" (CW, January 11), independent UK minicomputer manufacturer Computer Technology has reported that it was a front-runner for the project contract following its tender and discussions with the HSE last year.

This was denied by its spokesman, "we decided to withdraw from the bid because of the relocation expenses after our move from Bracknell to Slough" (CW, January 11), following a meeting of the two sides with ACAS last week.

"The company made a statement during the meeting which said that it was prepared to review, without prejudice and by April 15, the terms of our move from Bracknell to Slough," said a management spokesman. The managers, while "unsure what the statement actually means", have agreed to accept the delay.

"The tender requirement was withdrawn by us in the very last minute," said John Parnell, UK sales manager for CTL, "and this was after we had put in a lot of work. We were involved in the original bid for the pilot scheme, which I believe Nixdorf won, but before that we had many discussions with the HSE."

CTL's involvement with the HSE pre-dated the actual moment of issue of the tender by over a year, said Parnell, and everything seemed to be going well, even when a direct question was asked during a project meeting.

"We asked the HSE if CTL came up to its specifications," explained Parnell, "and they replied in the affirmative."

But according to an HSE spokesman, CTL only met the requirements in that "it promised the provision of additional

THE HSE kept on insisting on the tenders," Parnell, "and we were in contact with them. They said that there were time factors about the need absolutely had to be as ready to do this."

The Central Computer Agency confirmed its tenders did not win because that because of revision plan, "new tenders will be the near future."

LAUNCH of the Post Office's PSS public packet network has been put back to the first quarter of 1980, but tariffs are to be announced next month and details of facilities will follow in the spring. The Post Office hopes to offer fully digital leased lines between major cities using the CCITT X21 protocol in 1982 and a full scale digital network about five years later. This will fill the gap until System X is operating.

A SELF-CONTAINED portable microcomputer system will be introduced in the UK shortly by Computer Ancillaries of Egham.

Called the Durango, it is built around the Intel 8080 microprocessor and is programmed in BASIC. Launched to be 95% compatible with Data General Basic, costs about £7,500 and comes from a new California company also called Durango and formed by Diablo founder and former president George Comstock.

The version of Fortran supplied with the Cyber 203 enables the instruction provided, the vector processor hardware to be called directly. Each of these instructions can cause many thousands of calculations to be carried out, 65,000 being the maximum number.

Application areas for the 203 include weather forecasting, aircraft design, oil reservoir simulation and finite element analysis of complex structures.

### 'Freedom' Bill passes first hurdle

CLEMENT FREUD'S Freedom of Information Bill (CW, January 18) received an unexpected second reading in the Commons last Friday, after a four-hour debate, but its chances of becoming law unchanged are still slim owing to the impending General Election and the possibility of many amendments being put forward by the government. If the Bill is not passed by the time the election is announced, it will be completely lost.

Home Secretary Mervyn Rees said the government would not oppose the Bill but would be thinking hard about the kinds of information that should be open to the public. The results of a detailed study on how open government can be increased will be published next month, he said.

Ian Percival, for the Opposition, said that freedom of information should be tackled by a code of practice rather than legislation.

NCR is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125 million for communications equipment manufacturer Comint, whose IBM-compatible front-end processors are marketed in Europe by ITT (CW, January 18).

HP is offering \$125

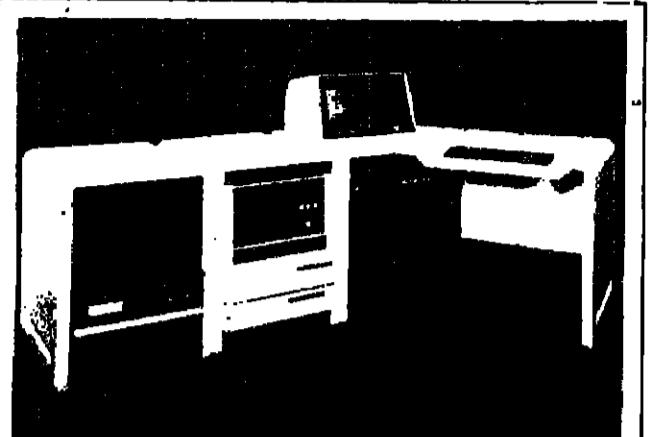
# Sharp rises in profits and sales at Honeywell and NCR

## NEWS ROUND-UP

YEAR END figures from Honeywell and NCR make it clear that IBM was not the only computer company doing booming business in 1978 (CW, January 18).

Honeywell's computer business returned operating profits of \$108 million, up 48% over last year, on turnover up 25% at \$1.294 million, benefiting con-

siderably from the surge of interest in the Level 6 mini-line. Profits benefited from a tax credit of \$19.9 million arising from CII-Honeywell Bull, in which Honeywell has a 47%



## A key to disk system with RJE and batch processing-KEYPACT.

- Powerful 16-bit computer (up to 256K bytes)
- 1 to 31 key stations (local or remote)
- Disk memory up to 400M Bytes (basic from 8.8M Bytes)
- Up to 4 magnetic tape transports (7- and 9-track, 800 and 1600BPI)

Simple, but powerful KEYPACT offers ease in formatting, validation, verification and reformatting. Without disturbing the data entry operation, concurrent programs can be run to support the local processing.

### DATAPACT - A stand alone business system

DATAPACT is an interactive, multiprogramme, stand alone business system. Sequential, random access, multi-indexed files ensure rapid data retrieval by all users concurrently. Each user is made to feel that the entire system is dedicated to his needs.

**ELBIT**  
DATA SYSTEMS LTD

ELBIT  
DATA SYSTEMS LTD  
COTTHALL HOUSE  
ST IVES ROAD  
MAIDENHEAD  
BERKS  
TEL.: (0628) 32212

Please send details/arrange demonstration

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
TELEPHONE \_\_\_\_\_

## Building your own accountancy program can be quite a headache. Try our cure.

Flexible accountancy software packages from NSC. The really soft alternative to hard cost.

Why spend millions of pounds? Tie up so many resources? Just to develop your own integrated accountancy system. NSC designed packages can meet most of your needs: general, sales or purchase ledger, invoicing and stock control. Use them fully integrated. Let them stand alone.

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

Isn't it time you discovered more about the NSC cure?

NSC offer quick, painless service. Training of user personnel. User manuals. Full installation and running maintenance.

# Cullinane back-end DBMS on the way? Cobol debugging aid added to Roscoe online system

FOLLOWING its implementation of a back-end database on a PDP-11/70 (CW, March 16, 1978), Cullinane is considering producing a database machine which would combine IDMS and a small IBM or IBM-compatible mainframe in a packaged back-end system.

The software which would make such a product possible is at an advanced stage of development, according to the company, and will be released as a software product regardless of whether or not it goes ahead with the database machine.

Called MCS (Multiple Computer Support), the software under development will enable several systems running database applications to funnel all DBMS processing onto a single machine. This has previously been impracticable because of the close coupling between application tasks and IDMS central version routines.

In the new architecture, Cullinane has adopted a packet mode of communication between application programs and IDMS — the same technique it developed for the PDP-11 implementation. This enables tasks to share the DBMS without either threatening the integrity of the database or causing lengthy lock-outs of competing processors.

Much of the redesigning necessary to support the new architecture has already been implemented in IDMS Release 5.0, noted a spokesman, and with the completion of MCS "all the software will be in place".

MCS is to be implemented in three phases,

MCS will provide the channel-to-channel connections between processors in close proximity. This software will be delivered to first customer test sites in about three months and will run under all versions of IBM's OS/VS.

Subsequently, Cullinane will

## DEC merges real time system with IAS

In a step which partially rationalises its operating systems for the PDP-11, Digital Equipment has merged its real time system RSX-11D with the latest release of the all-purpose IAS. With the new software, IAS Version 3.0, users can generate either RSX-11D or IAS from the same source code.

The new release has also enhanced IAS in a number of areas, notably by improving the efficiency of memory management and the heuristic time scheduler.

IAS (Interactive Application System) was originally developed by DEC in the UK, based on the extension of RSX-11D. One significant effect of the new work, which was also performed in the UK, will be to bring together development and maintenance effort on the two systems.

Although RSX-11D users will have to learn a new system

### Puzzler

DURING tests on a new computer installation, five different voltages are measured two at a time in series. Every possible permutation of two from five is recorded, giving ten separate readings as follows: 94, 98, 104, 91, 93, 87, 89, 103, 92, 99 (these are in no particular order). What are the five voltages? See page 15 for solution.

implement full telecommunications support with MCS. This will be integrated with the new IDMS-DC teleprocessing monitor (Software File, November 2, 1978), which entered user testing at the beginning of this week.

In its PDP-11 back-end implementation, some 1500 miles separated the minicomputer from the IBM 370 whose database requests it was processing. Although this system linked just two machines, there is no reason why the software should not link multiple application sites to a single central database.

Much of the attraction of taking the next step and producing a packaged database machine must derive from the dramatically improving price/performance characteristics of suitable hardware. Cullinane will be examining not only the imminent IBM E Series but also the wide range of low-cost plug-compatible systems.

No decision has yet been made to enter this market, but a Cullinane subsidiary has been tasked with evaluating its potential. One of the problems already identified is the commitment the company would have to make to maintaining hardware as well as software.

A packaged hardware/software system has, however, a strong appeal and in some areas offers significant technical opportunities. One idea already being explored by the company is that microcoding parts of IAS on the chosen machine.

Dedicated database machines have been under discussion for some time, but one of the most intriguing predictions in this area was made last year by Captain Grace Hopper. With collapsing hardware costs and the rising cost of software, she said, the time could be foreseen when purchasers of a complex software system would be given the

A COBOL debugging aid is the latest option to be added to ADR's online programming system Roscoe. Called Cobol Ade, the software aims to increase programmer productivity by providing full diagnostic information from test runs.

Cobol/Ade supervises batch mode program execution, collecting data according to a specification previously given by the programmer. It subsequently presents the data for online browsing.

One of its functions is to translate system information into the Cobol programmer's language. For example, instead of reporting a "SOUL" operation exception, it will report an abend caused by attempting to read a closed file.

The package is likely to be available from the UK's CAP/CPPI around March 2

and will cost about £3,000 to £4,000 for Roscoe users.

It also provides such facilities as a verb-level trace of logic flow; dynamic analysis of PPF/FORM logic; dynamic display of data in Cobol mode; and runtime statistics such as paragraph execution count.

## Principal forum on Fascia package

THE continuing growth in the user base of the fixed asset accounting package Fascia means that RTZ Computer Services for the first time expects over 100 delegates at the annual user group meeting, to be held next month.

One feature of the meeting will be a presentation from RTZ on its proposals for further development. There will also be an opportunity for users to put forward suggestions.

Nearly 100 companies now use Fascia, which has just completed its most commercially successful year for RTZ. Total sales of the package in 1978 amounted to over £1 million.

Among new customers for the software were Shell UK, Midland Bank and W. H. Smith.

All abends due to logic or data errors are trapped and analysed at abends due to invalid data automatically bypassed.

The package is likely to be available from the UK's CAP/CPPI around March 2

and will cost about £3,000 to £4,000 for Roscoe users.

Another recent Roscoe enhancement was the introduction of a word processing facility based on ADR's ETC (Editor Text Composer) system, scaled down version of the ETC under CICS, the facility designed to ease the production of business letters, memos and other such documents.

Also introduced was Roscoe/ETC Interface, giving users access to the full ETC system.

### PROGRAMMER NOTES: BEEN HELD OUT THIS WEEK DUE TO THE PAPER SHORTAGE IT WILL BE BACK NEXT WEEK

An application that is becoming something of a minor classic — and also something of an answer to that other "classic", the Swiss watch industry — is the one at British Sugar. Robert Bass, from the company, will lead off the case studies section, discussing in detail how micro-based control systems affected both the running of the sugar processing plant, and the

management of the operation.

The subject of cost, and in particular the cost of software, will be the theme of Martin Lloyd, a consultant with D M England and Partners.

Software is also a problem for

the staff that will eventually use the equipment once it is installed in a new application, and can lead to radical changes being made in a company's organisation.

Chris Blake, technical director of Trivector Systems, will examine the new skills that will have to be learned, and there

will also be an examination of the effects of a micro-based pro-

## MARTIN BANKS PREVIEWS NEXT WEEK'S MICROSYSTEMS 79

# Showcase for the micro industry

**Microsystems 79 will be held at the West Centre Hotel, Lillie Road, London SW6, from January 31 to February 2. Exhibition times are from 9.30am to 6pm each day. The conference starts at 9.15am on the first two days, and 9.30am on day three.**

the architectures of some of the new 16-bit micros appearing on the scene, and will present a paper on these apparently powerful new processors.

Advances in some areas of the technology will also come in for scrutiny, with Eddie Bleasdale talking on the new, sophisticated interface components being developed; and Peter Newman, of Plessey, giving a paper on the promise offered by bubble memory technology.

The final paper of the day will come from Vincent Tseng, of ICL Datafile, on the problem of choosing a, usually expensive, development system.

Day three is more for fun,

though it will probably be as seriously discussed as the two former sessions — for this will be personal computing day. Stewart Stevenson, of the Scottish Computer Society, will set out to answer the question, "How do I start in personal computing?" This will cover such irritating points as what to buy, what not to buy, and how to meet others like yourself.

Once you have a system, how do you put it to work? Addressing himself to this point will be Robin Bradbeer of the North London Polytechnic, who will describe some of the things the Poly has achieved with a variety of hardware and software.

For the real DIYer, Alan Clemons, of Teesside Polytechnic, will examine some of the considerations of kit design, and some of the technical problems that must be overcome to get to grips with the subject.

Basic has become something of a de facto standard for personal computing software, but some say it will not always remain so. Martin Heet, of Liverpool University, will look at the growing interest in Pascal, and its chances of dethroning Basic as the leading language.

Semiconductors tend to work for a long time without fail, then don't fail the first time they are used. But for systems built using such devices, the same cannot always be said. Robin Woods of Ister-Woods will consider what to do about it.

Vincent Tseng, of ICL Datafile, returns to the podium to talk on the potential capabilities, and pitfalls, of "store bought" software — the rapid growth in packaged programs.

What might prove to be the sun in the tail of the whole conference comes with the last speaker, Robert Denton of Texas Instruments. He will talk about what the future holds in personal computing.

## Leading companies exhibit

THE exhibition proper of Microsystems 79 will feature many of the leading names from the microcomputer business.

Several new developments in the small systems market are expected to be on show, such as the new Pet floppy disc, from Commodore, and Orange, a new Z80 microcomputer system from Cifer Systems that will support a wide range of high level languages running under the CP/M operating system.

In the industrial field, Swedish company Databoard/Satco AB will be showing its 4880 modular microcomputer system. This has over 60 different circuit boards available, and can accommodate a wide variety of CPU chips. Ferranti Computer Systems will be there with the F100-L, still Europe's only home designed micro, in a variety of configurations.

As the hardware is of little use without software, there will also be several exhibitors from the sector, including Micro Focus, with its CIS-Cobol, and CAP Microsoft, with MicroCobol.

## NEWBURY SMART MICRO-BASED VISUAL DISPLAY TERMINALS



Model 7008-7009

- \* British design and manufacture
- \* Based on 8080A Microprocessor
- \* Two-page Memory 3.840 characters
- \* 24 Displayed lines of 80 characters per page
- \* Switchable Transmission Speeds from 50 Baud to 19,200 Baud
- \* Split Speed Transmission Mode
- \* Dual Interface — CCITT V.24 and 20.40 mA Current Loop
- \* Hard Copy Printer Output
- \* Programmed Field Format - Blank, Background or Half Brightness
- \* XY Cursor Address (send and receive)
- \* Roll or Page Mode
- \* Video Output for External Monitor
- \* Full Character Editing Features
- \* Block Transmission from Screen by Line or Page
- \* Green Phosphor Non-glow screen



Models 7001-7002

- \* 24 Lines of 80 Characters per page
- \* Selectable Panel Rates from 50 to 19,200 Baud
- \* Dual Interface — CCITT V.24 and 20.40 mA Current Loop
- \* Teletype Compatible
- \* Hard Copy Printer Output
- \* Selectable Half or Full Duplex
- \* Video Output for External Monitor
- \* Green Phosphor Non-glow Screen



Model 7000

- \* Teletype Compatible
- \* 24 Lines of 80 Characters per line
- \* Selectable Baud Rates from 60 to 19,200 Baud
- \* CCITT V.24 Interface
- \* Selectable Half or Full Duplex
- \* Green Phosphor Non-glow Screen

## PRICES FROM £495

## NEWBURY LABORATORIES LTD HEAD OFFICE & SALES KING STREET ODHAM HAMPSHIRE RG25 1NN TEL: 025 871 2910 TELEX: 856615

Manufactured:  
Arabin Road, Newbury, Berkshire RG14 8NU

Tel: 0635 48864

Service Centre:

Bone Lane, Newbury, Berkshire RG14 8NH

Tel: 0635 48868

Northern Area Sales & Service:

2 Valley Road, Cheshire CH8 1PT

Tel: 01 491 0134

# Are you still locked in by that micro chip bargain you bought a year ago?



You thought you were saving money.  
And ever since you've been losing time, time, time...

digital  
**Digital Equipment Co. Limited**



Tel: 0752 822222 Int. ext.:  
Sent to: Terry Cliffe, Digital Equipment Co. Limited, Digital House, Kings Road, Reading, Berks RG1 4H4 Tel (0734) 593666

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tel: \_\_\_\_\_

Int. ext.: \_\_\_\_\_

CCITT V.24

20.40 mA

RS232C

RS423

RS422

RS485

RS427

RS428

RS429

RS432

RS434

RS435

RS436

RS437

RS438

RS439

RS440

RS441

RS442

RS443

RS444

RS445

RS446

RS447

RS448

RS449

RS4410

RS4411

RS4412

RS4413

RS4414</

Contact  
Steve Bass

# CONTRACT OR PERMANENT

We are the Specialists!  
ANALYSTS PROGRAMMERS OPERATORS  
VDU/KEY PUNCH OPS DATA CONTROLLERS

**FOCUS**  
Computer Services Limited  
01-487 5781  
(emp. agy.)

**FOR SALE**  
NCR 400  
Approximately five years old.  
Offers?   
Telephone:  
F. F. White  
(0804) 21621

**NATIONAL PHYSICAL LABORATORY**  
TEDDINGTON, MIDDLESEX  
  
A Mini Computer with real time operating system is required by NPL. The work to be run on the system will contribute to a research programme in the area of high level protocols and standards. It will include disk storage devices and communications controllers and will be required to connect to X25 links and will have access to installations outside the laboratory via the public data networks.  
  
Applications for Operational Requirements should be made within two weeks of the publication of this advert.  
  
Applications quoting CEH/25 should be sent to:  
  
Central Computer Agency  
Room 822, Riverbank House  
Millbank, London SW1

**LOOK AT THE CROWD  
IN OUR**

**MARKET  
PLACE**

Our Market Place feature (today on page 14-15) enables you to reach a vast 82,000 circulation of whom no less than 91% personally request their copies. No wonder we attract more display advertising than any other computer journal. 35% of all computer ads appear in our pages—and Market Place is the most cost-effective of all for leasing, 2nd hand hardware, maintenance services, wholesale goods, and contract staff... The rates are:

3.35 s.c. £9.35  
36-98 s.c. £7.70  
99 s.c. and over £8.05

Series discounts: 7-5%, 13-10%, 26-15%, 52-20%

**COMPUTER WEEKLY**

**market place**

Royal Aircraft Establishment, Farnborough, Hampshire  
**A MINICOMPUTER SYSTEM**  
  
(With at least a 32 bit architecture) is required by the Structures Department of the RAE for developing and running Fortran programs - some of the latter work in parallel. Applications for Operational Requirements quoting CEH/27 should be received by 10th February 1979.  
Applications for Operational Requirements quoting CEH/27 should be received by 10th February 1979.  
Proposals should be received by 28 February 1979.

ROYAL AIRCRAFT ESTABLISHMENT, FARNBOROUGH, HAMPSHIRE

WANTED

PROGRAM  
ANALYSTS

OPERAT  
ORS

VDU/KEY  
PUNCH OPS

DATA CONTR  
OLERS

WANTED



# "Go INMOS young man"

**WHAT?**  
INMOS is the new semiconductor venture set up to compete in the world market for advanced VLSI devices.

INMOS is establishing design and marketing activities in the UK and the US, with a prototype facility in the US and the main production centres in the UK.

INMOS is developing two micron n channel MOS technology which will be used to create the standards for the next generation of memory and microprocessor components.

**WHERE?**  
INMOS is establishing its UK Technology Centre at Bristol. This Centre will have responsibility for developing new products with the primary emphasis on microprocessors.

At the same time INMOS is establishing a US Technology Centre to develop memory components. The Technology Centres have been chosen with care to provide the best possible environment for the superstars we want, with the attractions of beautiful countryside, city life, good schooling and a wide variety of housing at acceptable prices.

There are opportunities at both the UK and the US Technology Centres and interchange between the two Centres will be encouraged.

**WHO?**  
At Bristol, INMOS is recruiting a design team to conceive a new microprocessor philosophy for the standard system component of the 1980's. INMOS wants, MOS process and design engineers to develop basic technology, Computer architects to create a component that is programmable and connectable, and Software designers to evolve the language and compilers to turn that component into a system.

The work involves innovation in design, architecture and software, and INMOS wants people who can make a contribution at all levels, from design superstars and managers to junior staff with potential.

**HOW?**  
We want the best men and women who can contribute to the leading edge devices which will establish INMOS as a major force in the semiconductor industry.

We offer the most The opportunity of a new Company, the pleasures of the West Country, the satisfaction of good rewards, the challenge of the future. Write NOW for more information and an application form to Iann M Barron INMOS Limited Whitefriars, Lewins Mead, Bristol.

Secretaries  
Demonstrators

Ring Bridge or Jenny for a change  
**486-5644**

WHAT ARE YOUR PLANS FOR THIS YEAR?  
If they include making that career change you'd been promising yourself, we are here to help.

You won't get where you want to be tomorrow by not calling us!

**INSIGHT** for a change

72-75 Marylebone High Street, London W1M 4AJ Telephone: 01-486 5644

**JBA**

## SOFTWARE DEVELOPMENT/ SUPPORT ON-LINE COMMUNICATIONS NETWORK

Our client, part of a large and diverse British manufacturing group and itself a very substantial company, is currently developing a new range of commercial systems for both their IBM 370/138 and a new on-line network of 8 PDP 11/70's.

To provide development and software support for the installation of the new network, the following professional programmers are urgently required:-

### Software Specialist

Candidates should possess extensive knowledge of DEC software, comprising a minimum of 3 years in software - preferably on RSX-11M systems. The appointee will be supporting both the network system and the applications programming teams - a wide range of responsibilities.

### Assembler Programmers

salary to £8,000 pa

The successful candidates will be working on the development of the communications network, so preferred applicants will have an RSX-11M/MACRO-11 background. However, applicants with at least 2 years ASSEMBLER experience on other types of hardware will be considered, and if appointed will be given full DEC training.

Contact Margaret Stevens for more details.

**JAMES BAKER ASSOCIATES**  
International Personal Consultants  
16 Maddox Street London W1  
Telephone: 01-401 4478

## Join the superstars

Without a doubt one of the brightest stars in the Computer Industry today is Wang (UK) Limited, their advanced technology and well designed computer and word-processing systems have firmly established them in a well recognised sector.

Recently they announced their virtual storage memory processor, offering the newest range of software aids to increase Programmer productivity dramatically. Storage is virtually unlimited, conversion is easy, all the grown-up languages are available and the 2200 VS has a smooth growth path from a small to medium sized installation with positively no changes to the application software.

The 2200 VS is designed as a business computer and as such provides a data processing function in an office environment. The essence of data processing in this context is to efficiently and speedily store, organise and retrieve data, thus providing multiple users with a timely and accurate response to their requests. With this aim, the 2200 VS, is an office computer that is accessible, modular and industry compatible. The 2200 VS meets these design aims by combining sophisticated but simple to use software, with a wide range of hardware.

Wang (UK) Limited is ten years old, having a large UK user base, selling primarily to the end user, with a growth rate in excess of 50%. The major new release of equipment, designed and engineered with today's needs in mind, represents a simple yet sophisticated computer product range.

This young, vital, computer manufacturer has experienced substantial marketing success and has therefore retained SCR to recruit into the following areas - Sales, Support and Field Service. The people we seek will certainly possess the enthusiasm and energy necessary to achieve the career progression inherent in the small, flexible and dynamic Company environment which is Wang (UK) today.

### Sales Executives - Income package to £15,000 pa plus Car

You are currently successful and possess a proven track record in selling mainframe or minicomputer hardware. Couple this with motivation and determination and you have the qualities necessary to spearhead the launch of the 2200 VS and the consequent attack on the market place. You will be working in a branch structure reporting to the Branch Manager, receiving excellent technical support and working towards realistic quota objectives.

### Technical Support Consultants - c. £7,500 pa plus Car

Essentially, self-motivated Programmer/Analysts possessing a high technical capability coupled with a sound commercial awareness. Your mainframe background should include three years solid experience in high level languages - Cobol/RPG/Basic. You will be expected to be au fait with standard commercial applications.

Demanding opportunities exist in both Pre- and Post-Sales roles, ranging from assistance during Sales meetings and involvement in presenting proposals, to liaison with outside software resources and having project control responsibility to detailed second level technical trouble-shooting.

### Field Service Engineers - c. £6,500 pa plus Car

An absolute minimum of six months experience is required in mainframe or minicomputer hardware and associated peripherals, or possibly a background in the communications industry.

Working in a branch function, Field Engineers will be responsible for the service and support of a Client base within a geographical area.

Following training, you will understand virtually all phases of systems operation and maintenance. You will perform installation of systems, diagnose system problems and repair/replace to component level. You will also be given the opportunity to gain an understanding of basic programming techniques.

All positions involve the ability to cope with customer liaison at Management level and therefore your business attitude and communication skills are equally as important.

Where? Opportunities exist in the London area, Midlands, and Manchester.  
For Midlands, Northern and Sales positions contact in the first instance:

Richard Champion on 021-236 3781  
weekends or evenings Hagley 4166

Dave Scarlett on 01-935 0671  
weekends or evenings 01-540 3549

For all positions in the South (except Sales) contact in the first instance:

**SCR** Specialist Computer Recruitment Ltd.  
Birmingham  
Equity & Law House, 35-37 Gt. Charles St., Queensway, Birmingham Tel: 021-236 3781  
London:  
3 Mandeville Place, Wigmore Street, London W1M 5LB Tel: 01-935 0671



# "Go INMOS young man"

**WHAT?**  
INMOS is the new semiconductor venture set up to compete in the world market for advanced VLSI devices.

INMOS is establishing design and marketing activities in the UK and the US, with a prototype facility in the US and the main production centres in the UK.

INMOS is developing two micron channel MOS technology which will be used to create the standards for the next generation of memory and microprocessor components.

**WHERE?**  
INMOS is establishing its UK Technology Centre at Bristol. This Centre will have responsibility for developing new products with the primary emphasis on microprocessors.

At the same time INMOS is establishing a US Technology Centre to develop memory components. The Technology Centres have been chosen with care to provide the best possible environment for the superstars we want, with the attractions of beautiful countryside, city life, good schooling and a wide variety of housing at acceptable prices.

There are opportunities at both the UK and the US Technology Centres and interchange between the two Centres will be encouraged.

**WHO?**  
At Bristol, INMOS is recruiting a design team to conceive a new microprocessor philosophy for the standard system component of the 1980's. INMOS wants:

- MOS process and design engineers to develop basic technology.
- Computer architects to create a component that is programmable and connectable, and
- Software designers to evolve the language and compilers to turn that component into a system.

The work involves innovation in design, architecture and software, and INMOS wants people who can make a contribution at all levels, from design superstars and managers to junior staff with potential.

**HOW?**  
We want the best men and women who can contribute to the leading edge devices which will establish INMOS as a major force in the semiconductor industry.

We offer the most:

- The opportunity of a new Company,
- The pleasures of the West Country,
- The satisfaction of good rewards,
- The challenge of the future.

Write NOW for more information and an application form to Iain M Barron INMOS Limited, Whitefriars, Lewins Mead, Bristol.

## Secretaries Demonstrators

Ring Bridge  
or Jenny  
for a change

486-5644

WHAT ARE YOUR PLANS FOR THIS YEAR?  
If they include making that career change  
you'd been promising yourself, we are here  
to help.

You won't get where you want to be tomorrow  
by not calling us!

**INSIGHT** *for a change*

72-76 Marylebone High Street, London W1M 4AJ Telephone: 01-488 5644

**JBA**

## SOFTWARE DEVELOPMENT/ SUPPORT ON-LINE COMMUNICATIONS NETWORK

Our client, part of a large and diverse British manufacturing group and itself a very substantial company, is currently developing a new range of commercial systems for both their IBM 370/138 and a new on line network of 8 PDP 11/70's.

To provide development and software support for the installation of the new network, the following professional programmers are urgently required:-

### Software Specialist

Candidates should possess extensive knowledge of DEC software, comprising a minimum of 3 years in software - preferably on RSX-11M systems. The appointee will be supporting both the network system and the applications programming teams - a wide range of responsibilities.

**salary to £8,000 pa**

### Assembler Programmers

The successful candidates will be working on the development of the communications network, so preferred applicants will have an RSX-11M/MACRO-11 background. However, applicants with at least 2 years ASSEMBLER experience on other types of hardware will be considered, and if appointed will be given full DEC training.

**salary to £7,000 pa**

Contact Margaret Stevens for more details.

**JAMES BAKER ASSOCIATES**  
International Personal Consultants  
18 Maddox Street, London W1  
Telephone: 01-491 4478

**WANG**

## Join the superstars

Without a doubt one of the brightest stars in the Computer Industry today is Wang (UK) Limited, their advanced technology and well designed computer and word-processing systems have firmly established them in a well recognised sector.

Recently they announced their virtual storage memory processor, offering the newest range of software aids to increase Programmer productivity - dramatically. Storage is virtually unlimited, conversion is easy, all the grown-up languages are available and the 2200 VS has a smooth growth path from a small to medium sized installation with positively no changes to the application software.

The 2200 VS is designed as a business computer and as such provides a data processing function in an office environment. The essence of data processing in this context is to efficiently and speedily store, organise and retrieve data, thus providing multiple users with a timely and accurate response to their requests. With this aim, the 2200 VS, is an office computer that is accessible, modular and industry compatible. The 2200 VS meets these design aims by combining sophisticated but simple to use software, with a wide range of hardware.

Wang (UK) Limited is ten years old, having a large UK user base, selling primarily to the end user, with a growth rate in excess of 50%. The major new release of equipment, designed and engineered with today's needs in mind, represents a simple yet sophisticated computer product range.

This young, vital, computer manufacturer has experienced substantial marketing success and has therefore retained SCR to recruit into the following areas - Sales, Support and Field Service. The people we seek will certainly possess the enthusiasm and energy necessary to achieve the career progression inherent in the small, flexible and dynamic Company environment which is Wang (UK) today.

### Sales Executives - Income package to £15,000 pa plus Car

You are currently successful and possess a proven track record in selling mainframe or minicomputer hardware. Couple this with motivation and determination and you have the qualities necessary to spearhead the launch of the 2200 VS and the consequent attack on the market place. You will be working in a branch structure reporting to the Branch Manager, receiving excellent technical support and working towards realistic quota objectives.

### Technical Support Consultants - c. £7,500 pa plus Car

Essentially, self-motivated Programmer/Analysts possessing a high technical capability coupled with a sound commercial awareness. Your mainframe background should include three years solid experience in high level languages - Cobol/RPG/Basic. You will be expected to be au fait with standard commercial applications.

Demanding opportunities exist in both Pre- and Post-Sales roles, ranging from assistance during Sales meetings and involvement in presenting proposals, to liaison with outside software resources and having project control responsibility to detailed second level technical trouble-shooting.

### Field Service Engineers - c. £6,500 pa plus Car

An absolute minimum of six months experience is required in mainframe or minicomputer hardware and associated peripherals, or possibly a background in the communications industry.

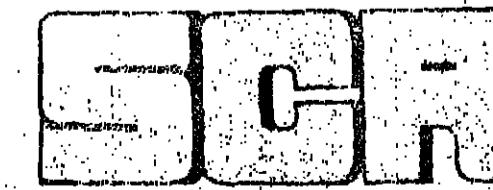
Working in a branch function, Field Engineers will be responsible for the service and support of a Client base within a geographical area.

Following training, you will understand virtually all phases of systems operation and maintenance. You will perform installation of systems, diagnose system problems and repair/replace to component level. You will also be given the opportunity to gain an understanding of basic programming techniques.

All positions involve the ability to cope with customer liaison at Management level and therefore your business attitude and communication skills are equally as important.

Where? Opportunities exist in the London area, Midlands, and Manchester. For Midlands, Northern and Sales positions contact in the first instance: Richard Champion on 021-236 3781. Weekends or evenings Hagley 4168

For all positions in the South (except Sales) contact in the first instance: Dave Scarlett on 01-935 0671. Weekends or evenings 01-540 3549



Specialist Computer Recruitment Ltd.

Birmingham:  
Equity & Law House, 35-37 Gt. Charles St., Queensway, Birmingham Tel: 021-236 3781  
London:  
3 Mandeville Place, Wigmore Street, London W1M 5LB Tel: 01-935 0671



DOS/VIS

## EXPERIENCE . . .

• • • • • then  
advance your career  
in CROYDON

Positions open to male & female applicants, please telephone (24 hour service) for initial discussion or write to address below.  
QUOTE REF. CW 106.9S.

COMPUTER AND  
PROFESSIONAL  
PERSONNEL  
CONSULTANTS



**CAPP ASSOCIATES** Computing Services Association  
LONDON AND MANCHESTER

01-686 9693  
A.M.P. HOUSE, DINGWALL RD.,  
CROYDON, CR9 2AU

Please note  
new address  
same phone  
number

Computer Board For Universities And  
Research Councils

## Joint Network Team Appointment of Head

Rocognising that flexible and compatible interconnection arrangements will play an important role in extending access to computing resources and expanding the range of facilities available to computer users in the academic community, the Computer Board and Research Councils are to set up a Joint Network Team. Its main aim will be to prepare, supervise and participate in a coordinated programme for the further development of computer networking among universities and Research Council institutes.

The specialist team is expected to consist of up to six posts and will be located at the Rutherford Laboratory, Chilton, Oxfordshire.

The responsibilities of the Head of the team will include presenting a programme of work to the Computer Board and the Research Councils for financial approval and supervising its execution. He will be called on to make recommendations to the sponsoring bodies on network plans for individual universities and Research Council Institutes and to advise on technical and financial aspects of computer networking. An important part of the post will be to establish and maintain collaborative relationships with senior managerial and technical staff in computer centres throughout the academic community.

Applications are now invited from people with an interest in computer networking and with experience of university and Research Council computing. Applicants should have the ability to manage technical projects and a sound basic knowledge of computing and telecommunications technologies. Familiarity with current trends towards networking standards and proposed public packet-switched services would be an advantage.

*The appointment will be for a fixed term of three years.*

The salary will be in the range £10,746-£12,091 or £10,043-£11,300 depending on the superannuation scheme chosen.

Further details and an application form may be obtained from Jane Griffiths in the Personnel Group, Rutherford Laboratory. Please quote reference VN.760. Closing date for applications 12th February 1979.

Rutherford Laboratory, Chilton, Didcot, Oxfordshire OX11 0QX.  
Tel: Abingdon 21900.

Here are two first class career opportunities for current operations personnel with substantial IBM 370 DOS/VIS experience.

A large international company successfully installed last year an IBM 370 in a purpose built data centre in Croydon. Running under DOS/VIS and POWER/VIS both batch and on-line work is processed.

### OPERATIONS SUPPORT to £5500

A further member is required for our clients operations support team. The work will be interesting and varied, involving procedures, scheduling, controlling various aspects of the operations area, and close liaison with the Systems and Programming area.

Applications are invited from senior operators or shift leaders with 3 years or more experience of working in an IBM 370 DOS environment.

### JUNIOR SOFTWARE PROGRAMMER to £5500

For this position, in addition to good DOS/VIS experience, you will have an appreciation of COBOL and/or ASSEMBLER programming.

The successful applicant will become involved in the development and maintenance of operating systems and TP monitor, distributive processing based on minis, evaluation of new software and will provide technical support to the development and operations sections.

In addition to a good start salary, benefits include a non-contributory pension and free life insurance.

Would you like to know more, then contact REX SCONES at Capp Associates CROYDON offices, indicating which of the two above positions is of particular interest.

JBA

# GERMANY

JBA can offer a very wide selection of vacancies throughout Europe, ranging from programming and analysis, d.p. instructors, lecturers, to high level consultants. This week we feature some of the permanent and contractual jobs in Germany.

## DOS/VIS

## OS/MVS

### PROGRAMMERS PROGRAMMERS/ANALYSTS

£DM60,000  
£DM65,000

The client is a highly reputable consultancy organisation in Southern Germany whose combined engineering and computer development experience is almost second to none. Their services range from scientific and research projects to commercial and industrial applications systems.

One of their current projects requires a team of experienced IBM 370 DOS personnel, who must have at least 2 years PL/I programming, together with CICS and/or DL/I. Previous use of decision tables is essential for at least one team member.

The team will ideally commence Feb/March and will continue for not less than 1 year with subsequent assignments available for an extended stay in this wonderful part of Europe. German is desirable but not essential.

### SYSTEMS PROGRAMMERS

£DM60,000-£DM90,000

Several permanent positions are available in a new systems support team currently being established by this major mainframe manufacturer, who are vastly expanding their range of hardware for 1979. A minimum of two years experience is required, together with a thorough knowledge of DOS.

Our client is offering higher than average salaries (in UK terms £16-24k), plus house agent and removal expenses, initial family separation allowance, a minimum of 6 weeks holiday (+ all statutory holidays) and paid time off to attend German lessons. An excellent package.

### COMMERCIAL APPLICATIONS DEVELOPMENT

This large computer services company is situated in a superb part of Southern Germany, near one of the oldest and most beautiful towns in Europe. Successful applicants can be assured of a career within the organisation and an excellent, progressive salary package.

### APPLICATIONS PROGRAMMERS

Salary: start at £DM150,400 rising to £DM165,300

A minimum of three years commercial programming experience, with a sound knowledge of IBM 370 OS/COBOL. Experience of BA1 would be viewed extremely favourably, as would the ability to speak German although neither of these is mandatory.

### SYSTEMS ANALYSTS

### Salary: start at £DM56,700 rising to £DM73,000

Candidates must have had formal training in Analysis, backed by a period of at least two years in commercial programming. Five years d.p. experience in all is required, so applicants will have had a good deal of exposure to commercial systems and applications. Knowledge of German is more important in these positions.

.... ALSO ....

### SOFTWARE PROGRAMMER (2900 Fortran)

£DM50,000-£DM60,000

Our client, located near Stuttgart, is seeking a technician to assist in the development of a complex scientific system involving digital image processing techniques.

Applicants must have ICL 2900 Fortran programming experience, a scientific or technical background—including use of data simulators and test drivers—plus the ability to work without supervision. Long term project with lots of technical involvement and experience-building prospects.

### WAREHOUSE AUTOMATION

£DM68,000

Tremendous opportunity for a specialist in process control systems to head up a small project team designing a complete micro and mini based system to automate a large warehousing and goods storage facility.

This position would initially be offered on a contractual basis, although the chances of subsequent permanent employment are excellent.

Contact: Mike Creamer or Andy Wright

**JAMES BAKER ASSOCIATES**  
International Personnel Consultants  
16 Maddox Street, London W1. Tel: 01-491 4478



If the prospect of working on the Continent appeals to you, prior consultation and advice from people who know the market place and the aspects of working abroad (in detail) is essential, and we'd like to discuss the situation with you—whatever your experience.



## JBA

# MICROSYSTEMS APPLICATIONS EXECUTIVE

### Midlands

£29,000

We have been retained by a large diverse international engineering organisation, employing 100,000 people worldwide, to recruit a senior microsystems specialist to take responsibility for the development of microprocessor technology in both the products and the manufacturing activities. The prime role is to provide the centre of expertise for each of the divisions in a co-ordinated manner.

Candidates should have a degree, coupled with several years in industry developing CAD/CAM systems, and a proven record in the design of microsystems. Management experience, perhaps as a software/graphics project manager, would be an advantage. Above all, applicants must have the ability and personality to negotiate with senior managers including divisional directors.

This is an outstanding opportunity to influence the use of microprocessors in industry. Salary is negotiable according to experience. Attractive company benefits including relocation where appropriate.

In the first instance please contact:

Jim Baker,  
**JAMES BAKER ASSOCIATES**  
International Personnel Consultants  
16 Maddox Street, London W1  
Telephone 01-491 4478

John Lewis

# ata Computer Recruitment

A division of ATA Selection and Management Services, recruitment consultants to Industry and Commerce since 1962

## SALES EXECUTIVES £13,000 NATIONWIDE

As one of the most recognised International manufacturers of electronic equipment, with Consumer, Commercial and Communications bases; our client enjoys a reputation envied by many.

Opportunities now exist throughout the UK to join their dramatically successful computer division. With their long term experience they are capable of offering terms of employment unavailable elsewhere. Initial product training is designed to enhance product quality. Excellence of service support ensures that the successful sales executive need never worry about reliability.

The company pay-plan will give the experienced mini-computer or sophisticated business systems sales executive (male/female) a basic salary of c £6,000.

However the less experienced graduate should also give this opportunity serious consideration. Initial guaranteed income levels will reflect your current success.

Quota commission earnings and generous bonuses ensure that the truly determined will achieve first year earnings of £13,000. A quality saloon car, full expenses plus other multinational company benefits complement this desirable package. For a confidential discussion please contact your nearest branch.

LONDON (01) 637 0781 MANCHESTER (061) 832 6856 BIRMINGHAM (021) 843 1994 BRISTOL (0272) 211035 EDINBURGH (031) 226 5381 CRAWLEY (0293) 514071 SOUTHPAMPTON (0703) 376555

230 Gl. Portland St. W1H 5HG 86 Cross St. M2 4LA

B24HQ

Woolworth Building, 102 New St.

Equity and Law Building

36/38 Baldwin St. B51 1NR

Anglia House, 24/26 Frederick St. 36 The Broadway

EH2 2JR

23 Cumberland Place

S01 2BB

## Software Sales Executive

HOME COUNTIES

c £12000 + Quality Car

Our client is a highly successful computer services company with a reputation for providing quality application software. Established for over 6 years the company has developed a strong client base and is now set to double turnover in 1979. This has created a superb opportunity to join the mini computer division.

Based in the N.W. Home Counties, the prime function will be to develop sales penetration across a broad spectrum of commerce and industry, backed by a strong technical support and consultancy team. As the chosen software company of 2 leading mini-computer manufacturers — 50% of current business is being operated through leads, a very real advantage in a competitive market.

This is a key appointment which will lead toward a developing career within the company. Therefore we are seeking a highly skilled sales "professional" able to demonstrate a successful track record in the software, mini-computer or associated markets.

Rewards by way of high base salary, guarantees and generous performance bonuses should realise £12,000 in the first year and £15-20,000 in the 2nd year. In addition there is a quality car provided.

Applicants, male or female, should apply in strict confidence with career details to: Mr Warner, Director, Gresham Executive Appointments, 1 Harewood Place, Hanover Square, London W1R 9HA. Tel: 01-529 9841/4

Gresham  
Executive Appointments

## SENIOR SYSTEMS ANALYST

### NEW MINICOMPUTER

Initially Germany

up to £15,000

OUR CLIENT is a respected and well established international manufacturer of sophisticated data processing systems.

THE POSITION entails development of commercial application systems for a new range of minicomputer, is a key role in this exciting project and offers a major career path to the person appointed who will have the opportunity to return to the UK after two years.

APPLICANTS should have extensive programming and application system design experience, preferably gained with a computer manufacturer, and be capable of controlling significant system development projects. The ability to effectively deal with customers and software houses whilst leading a team is imperative — as is the ability to achieve every individual aspect associated with total system development including feasibility studies, cost estimate plans and implementation. Preference will be given to applicants educated to degree standard and aged 25/35.

Write in confidence quoting CWE 148  
D. H. May — Adviser to the Company

peteron davdon

3 Mandeville Place, Wigmore Street, London W1M 5LB. Tel: 01-406 1888



Join Abbey Life at Bournemouth...  
and your family can spend  
the summer on the beach  
and be home in time for tea!



Chief Operator 5.5-6.5K  
Operations Support Staff 4.5-5.5K  
Business Systems Analysts 5-7K  
Computer Systems Analysts & Systems Designers 5.5-7.5K  
Systems Programmers 5.5-7K  
Programmers 4.5-7K

data processing professionals who wish to extend their expertise.

The vacancies result from our expansion plans and are in addition to the staff we recruited from our September recruitment campaign.

Salaries are competitive and there is a substantial package of additional benefits. These include:

Subsidised mortgage scheme, Assistance with relocation, Non-contributory pension scheme, Free Life Assurance, Subsidised restaurant, Staff discount shop.

To continue the achievement of our long-term plans, we put great emphasis on the career development and training of our staff and on the recruitment of

Interviews will be held in Bournemouth or London. For further details about data processing in Abbey Life and to obtain an application form:

Telephone Barry Greenwood during normal office hours on Bournemouth (0202) 292373, extension 4444.

Outside normal working hours telephone Terry McDowell on Christchurch (02015) 77618 for details of the Operations vacancies, and Barry Greenwood on Bournemouth (0202) 761983 for details of all other vacancies.

Write to Barry Greenwood at Systems Administration Department

**Abbey Life**  
Assurance Company Limited  
80 Holdenhurst Road, Bournemouth BH8 8AL



# MANAGEMENT & EXECUTIVE SELECTION

telephone 01-637 9611

## COMPUTER ENGINEERS

**ARE YOU IN THE MOOD FOR A CHANGE?  
THEN MAKE SURE IT'S FOR THE BEST**

We are looking for Computer Engineers in various locations both U.K. and abroad. So whether you are mini, mainframe, or peripheral engineers, trainee or senior level, we will be interested to hear from you.

Listed below are a few of our most urgent vacancies, but we have hundreds more on file. So let us show you what jobs are available and help you find the one that suits you best.

### GENERAL MINI/MAINFRAME

Central London  
Outer London  
Midlands  
Berkshire

- £10K package
- £6 1/2 K package + Car
- £6 1/2 K package + Car
- £9 1/2 K package + Car

Contact Peter Gorton or Alan Slater today!

### IBM 370 SERIES

International  
London  
Manchester  
Bristol

- £13K package + Car
- £14K package + Car
- £13K package + Car
- £10K package + Car

Suite 201/6, Albany House, 324 Regent Street, London W1R 5AA. 01-637 9611

MANAGEMENT &  
EXECUTIVE SELECTION

# MANAGEMENT & EXECUTIVE SELECTION

telephone 01-637 9611

### ANALYST/PROGS

£5-£15K

LONDON/BIRMINGHAM/BRISTOL/MANCHESTER and EUROPE

We have been retained by a manufacturer of mainframe and mini computers to recruit staff on a nationwide basis for both senior and junior positions in the following areas:

Applications and software development, database and communications, sales and marketing support, in house design of computer suite.

The big company benefits include high basic salary, incentive bonus, car where applicable.

NO MATTER WHAT YOUR EXPERIENCE, NO MATTER WHERE YOU LIVE, WE WANT TO TALK TO YOU,

For further details contact Tony McGrath on 01-637 9611.

Suite 201/6, Albany House, 324 Regent Street, London W1R 5AA. 01-637 9611

### COME IN PL1

to £6K + benefits  
TO INCREASE YOUR MINI 'MOUS'

A major British manufacturer using large IBM mainframes is seeking PL1 Programmers with a good degree for their Head Office in North West Kent.

Opportunities exist to work on many varied systems or transfer to working on minis in this go-ahead, computer-oriented company.

They are located near major railway lines to and from London and are easily accessed from Medway, Sheppen, Kent Coast or South London, and are well served by other means of public transport as well as adequate parking.

Basic salary is good and benefits include London Weighting, Bonus/Productivity Scheme, subsidised canteen, contributory pension scheme, and excellent sports and social facilities.

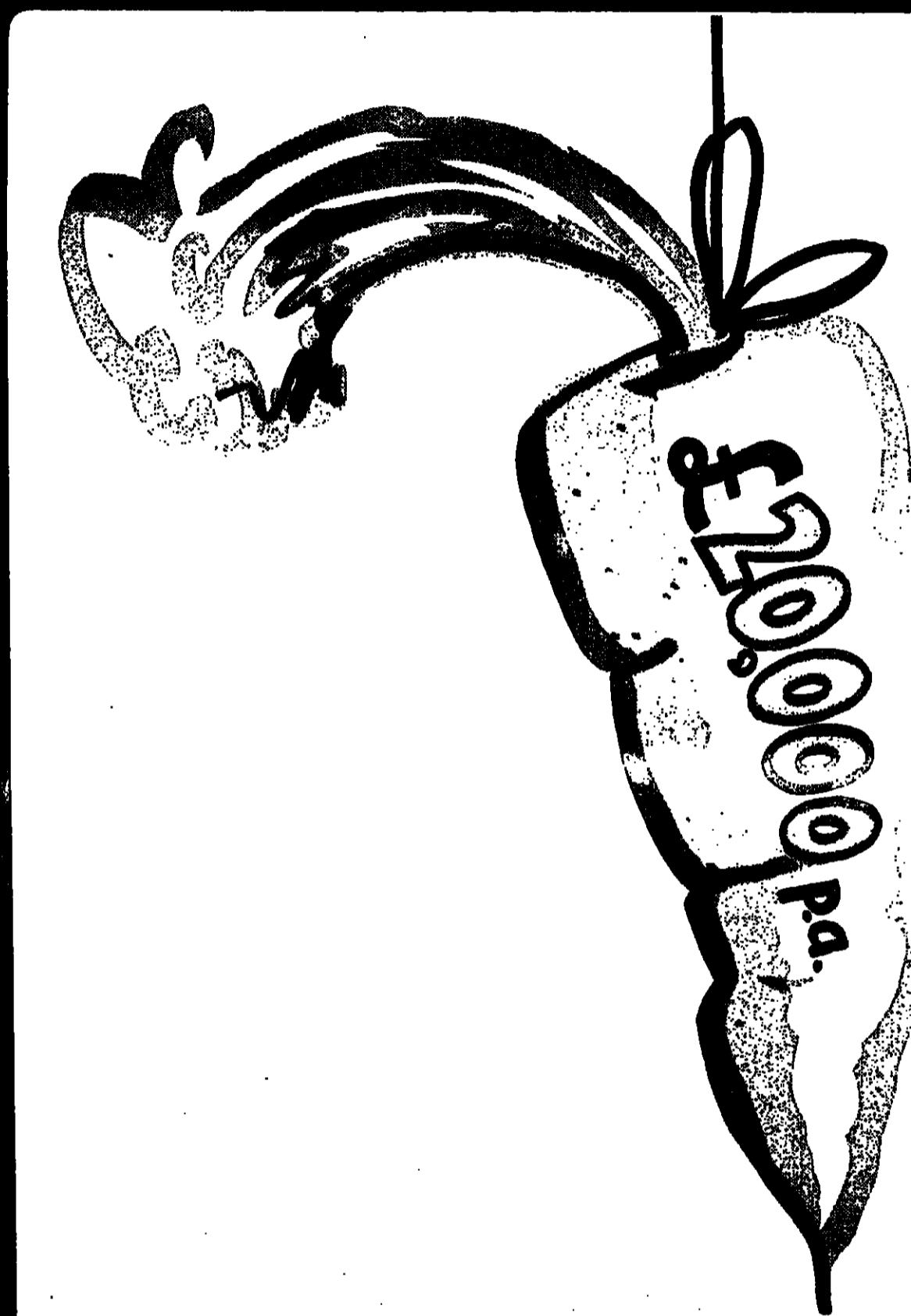
### NORTH WEST KENT

Don't delay — phone Derek Pearson today!

MANAGEMENT &  
EXECUTIVE SELECTION

# MANAGEMENT & EXECUTIVE SELECTION

telephone 01-637 9611



*What is  
your incentive  
for '79?*

## Any sellers?

- ★ Word Processing is the future (ten times the potential of any other market — read the reports)
- ★ Offices and support throughout the U.K.
- ★ (London, Birmingham, Manchester, Leeds, Reading)
- ★ AES/Wordplex Ltd. is the company (market leaders in screen based word processing)
- ★ Everything going for the salesman (the market, the product, the company, and the rewards)

### NEED WE SAY MORE!

Contact Faye Ogilvie on 01-637 9611

1/6, Albany House, 324 Regent Street, London W1R 5AA. 01-637 9611

MANAGEMENT &  
EXECUTIVE SELECTION

1/6, Albany House  
London W1R 5AA

## Develop your commercial applications skills

# A chance to spread your wings

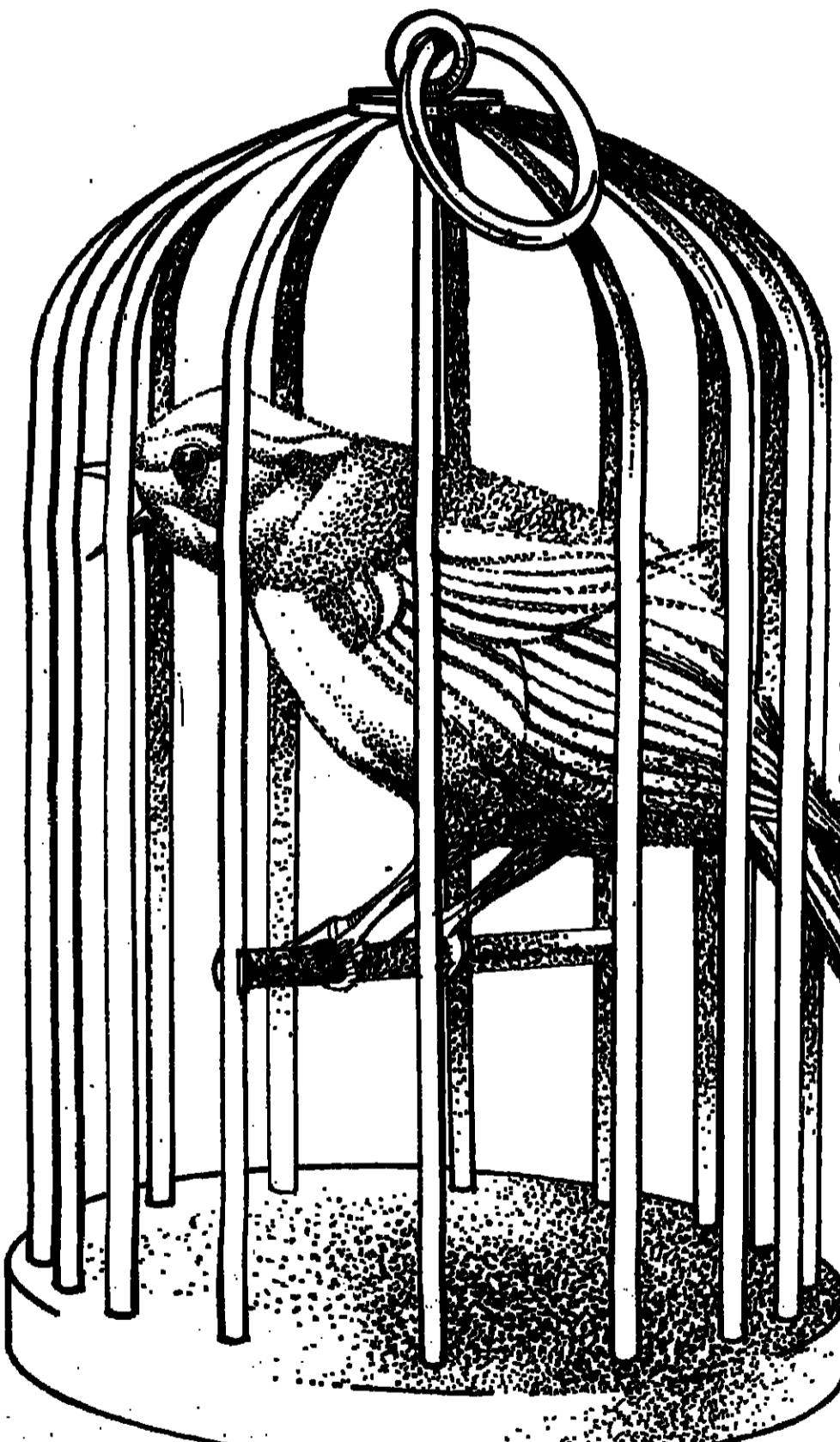
**Systems Analysts  
COBOL Programmers  
Consultant Analysts  
Systems Designers  
Team Leaders  
Project Managers**

1978 was another extremely successful year for ICL, turnover was up by 22% to over £500m, with over half the business coming from overseas.

This kind of success offers a tremendous challenge to the team who provide our internal company systems worldwide - and our development plan, with a £multi-million budget, means that we now have opportunities that will appeal to ambitious systems and programming professionals who expect rapid career progression as well as job satisfaction.

A feature of our development plan is the introduction of systems networking based on an impressive range of hardware from ICL minis, such as System Ten and the 1500 series, through to very large 2900s.

Our project management approach means that systems and user staff are very closely integrated into development teams. This unusual and extremely successful process ensures a high level of commitment which provides technically satisfying systems which really meet the user department's needs. Since ICL operates in 80 countries worldwide, international travel is a possibility as is the chance for longer term overseas assignments. There is also tremendous project variety, covering the range of the Company's activities from



manufacturing to marketing, with the chance to specialise in pure systems development or maintenance and user support.

But perhaps the greatest attraction is the opportunity for career development. Working for a

computer manufacturer means that you could make career moves into functions such as marketing, finance, or customer support, or perhaps consultancy with our subsidiary Dataskil, Europe's leading software house.

### International Computers

think computers - think ICL



# MANAGEMENT & EXECUTIVE SELECTION

telephone 01-637 9611

## FIELD SERVICE ENGINEERS

**SALARY PACKAGE:** Generous and Competitive Salary Plus Car  
**AREA:** Greater London

**EXPERIENCE:** Practical experience of computer systems in industrial/commercial environments is required.

**OPPORTUNITY:** The U.K. Division of this multi-million dollar American company is small but established, and with sales at an unprecedented high, they expect to double in size within five years. Thus career progression is virtually guaranteed.

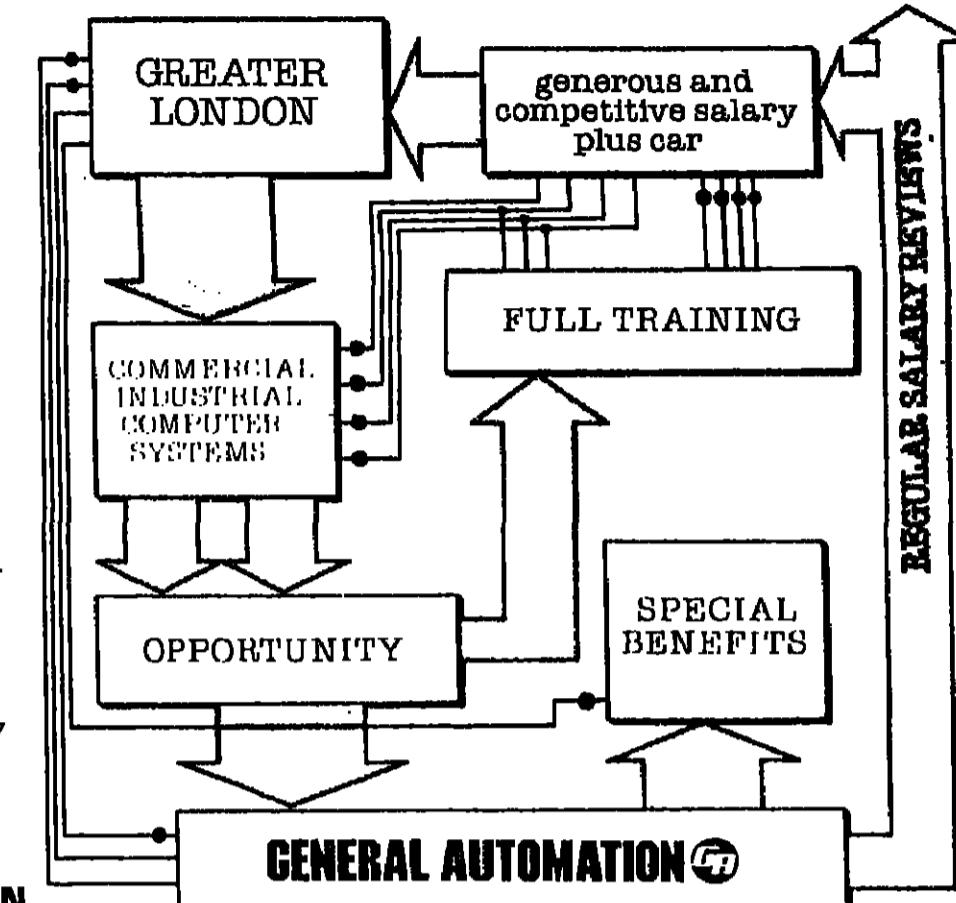
**TRAINING:** Full training will be provided at the company's European Training School on a regular basis.

**FORWARD-LOOKING COMPANY:** The company manufacture powerful mini and micro computers for industrial/commercial use. Their success has resulted in over 18,000 systems installed worldwide. Always at the forefront of technological advances, their activities are constantly highlighted in the International and Trade press.

**SPECIAL BENEFITS:** Free BUPA, Free Life Assurance, Contributory Pension Scheme (5% of salary), 20 days' Holiday p.a.

For positive career advancement, contact Peter Norton

Suite 201/6, Albany House, 324 Regent Street, London W1R 5AA 01-637 9611 **MANAGEMENT & EXECUTIVE SELECTION**



## Get Ahead in '79

### COMPUTER PROJECT MANAGER

Location Central London c£9k

Our client is currently developing an extensive range of real time and batch database systems based on a network of PDP-II minicomputers and an IBM 370/138. The Project Manager will be required to take charge of computer systems development in the Sales and Stock accounting area.

### COMPUTER SUPPLIES

### MAGNETIC MEDIA c£8k

Dynamic sales representatives sought by our client to cover various territories in the U.K. If you are involved in pre-print stationery/Mag Media and seek the opportunity to broaden your horizons then contact us now.

### CUSTOMER SUPPORT/DEMONSTRATOR

Word Processing London/S.E. to £5.5k + Car

Are you experienced in training and demonstrating W.P. or small business systems? Then our client, one of the leaders in this field, can offer you tremendous opportunity to increase your career and earning potential.

Applicants male or female should apply in strictest confidence to: David Wilkinson, Gresham Executive Appointments, 1 Harewood Place, Hanover Square, London W1R 9HA. Telephone 01-529 9841/4.

Gresham  
Executive Appointments

## MICROSTAR \*\*\*\*\*

# Commercial Systems Analyst

**£7,500+ GUILDFORD**

Our client manufacturers and sells white goods commercially through 350 outlets, and via major retail chains in the U.K.

The data processing department is a well-staffed unit currently engaged in a major IMS development. All facets of commercial administration are currently computer based.

The advertised position heads up the IMS analytical activity and reports directly to the DPM. It will involve technical/political liaison at national, European and transatlantic levels, especially for database designs.

A degree and five years' commercial analysis experience will be required to qualify for this senior position in a dynamic and well-managed company.

Write, in the first instance, to Robert G. J. Wood, MA, who is advising personally on this appointment. Microstar Limited, Highbury House, 57 Portsmouth Road, Guildford, Surrey GU2 5QZ. Telephone Guildford (0483) 33021

\*\*\*\*\* MICROSAR



# TRAINING INSTRUCTOR

## WATERFORD, IRELAND

**Salary up to £7,400**

### DIGITAL PROCESS CONTROL

#### MEASUREX (IRELAND) LIMITED

is a subsidiary of Measurex Corporation and is a leading manufacturer of Digital Process Control Systems for the paper, plastics, rubber and sheetmetal industries in Europe and internationally. Due to continued expansion we have an immediate opening in our Waterford facility for a training instructor.

#### RESPONSIBILITIES

Having completed appropriate training the successful candidate will join an established team of instructors in our Training Department. The team conducts courses for the Company's field service technicians and in addition are responsible for the design and development of new courses.

#### QUALIFICATIONS:

Candidates should possess a degree in the Electrical/Electronics or Science field. Applications from persons with an equivalent qualification and good experience in the electronics industry would be welcome. Ability in verbal and written communication is essential. Commencing salary will be commensurate with experience. A contributory pension scheme is in operation. Appropriate relocation expenses will be paid.

Please telephone or write for application form to:

THE PERSONNEL MANAGER  
MEASUREX (IRELAND) LIMITED  
INDUSTRIAL ESTATE, WATERFORD, IRELAND  
TELEPHONE: 051-72151



## Scheduler

Excess Insurance is part of a major international corporation with insurance interests throughout the world. We now need the services of an experienced Scheduler to join our Data Control Department at our Head Office in Worthing.

It will be an advantage to the applicant to have a background in either data control, or computer operation. On the other hand we are prepared to train someone who is willing to learn a worthwhile and satisfying job.

Our current computer is a 370/148 and an IBM 3031 is due for installation in June 1979.

A good salary is offered according to experience and you will enjoy excellent working conditions at our modern offices. Benefits include a non-contributory pension scheme and free life assurance and a mortgage subsidy when applicable. A licensed Sports and Social Club with swimming pool and full sporting facilities together with a flexible 35-hour week, staff discounts, four weeks holiday and luncheon vouchers.

For further details or application form, please write or telephone Irene Northcott, Personnel Officer, Excess Insurance Group, The Warren, Worthing, West Sussex BN14 9QD. Telephone Worthing (0903) 39933.

Excess Insurance Group

**ata** Computer Recruitment

A division of ATA Selection and Management Services, recruitment consultants to Industry and Commerce since 1962.

### DATA PROCESSING MANAGER (SCOTLAND)

#### THE OPPORTUNITY TO DO IT YOUR WAY

Our clients, a major international company, require an energetic manager to establish, develop and control a data processing department at their U.K. operational headquarters near Glasgow.

The company is the world's largest manufacturer of capsule, self-propelled aerial work platforms. Their U.K. production plant commenced operations during 1977 and the introduction of a computing facility is now of prime importance.

The successful candidate will be 25-35 years and educated to degree level or equivalent. He/she will have a sound working knowledge of all aspects of computing preferably gained on small IBM, Honeywell, DEC or Univac hardware. Knowledge of Cobol, RPG II or Fortran IV is essential.

Approximately three months will be spent in the U.S.A. becoming familiar with the parent company's systems which run on an IBM system/3 model 16.

The salary will be in the region of £7,500 p.a. although for a model candidate this figure is negotiable. Normal large company benefits and relocation expenses are included. If you're versatile, determined and prepared to roll up your sleeves to get things done, this is the opportunity you've been looking for.

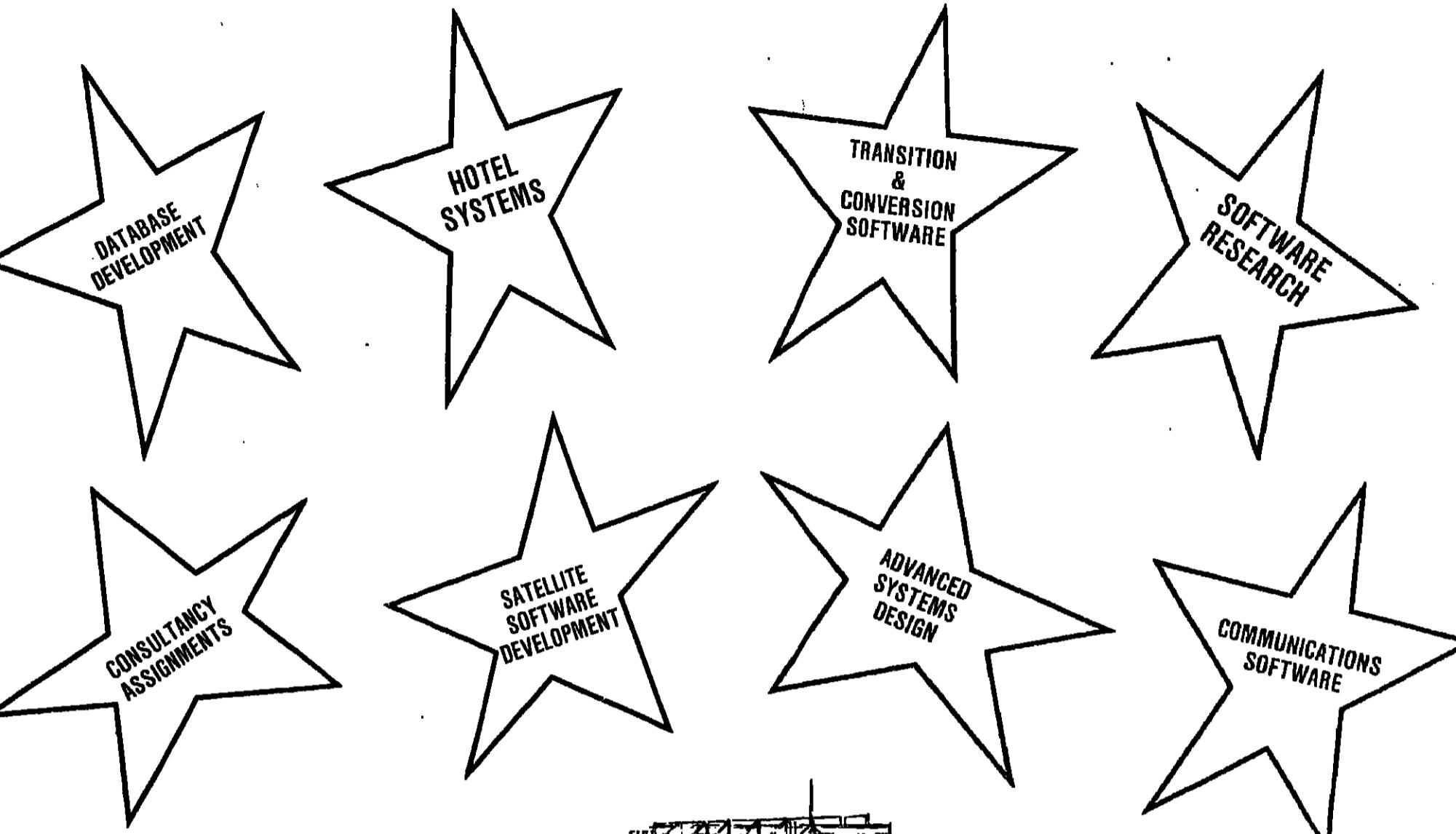
For further information contact:

H. W. Clark  
Manager  
ATA COMPUTER RECRUITMENT  
Anglia House  
24/26 Frederick Street  
Edinburgh EH2 2JR  
Tel: 031 228 6381 (reverse charges)

Normal business hours: 9.00 a.m.-5.30 p.m.  
Monday, 29 January 9.00 a.m.-8.00 p.m.  
Tuesday, 30 January 9.00 a.m.-8.00 p.m.

LONDON (01) 637 0781 MANCHESTER (061) 832 5856 BIRMINGHAM (021) 649 1000  
BRISTOL (0272) 211035 EDINBURGH (031) 226 5381 CRAWLEY (0293) 514071  
SOUTHAMPTON (0703) 37555

# MARCOL'S GOING PLACES ...FAST! ARE YOU?



#### The Benefits:

Overseas Travel  
Career Development  
High Financial Rewards  
Equity Participation  
Unlimited Growth Opportunities

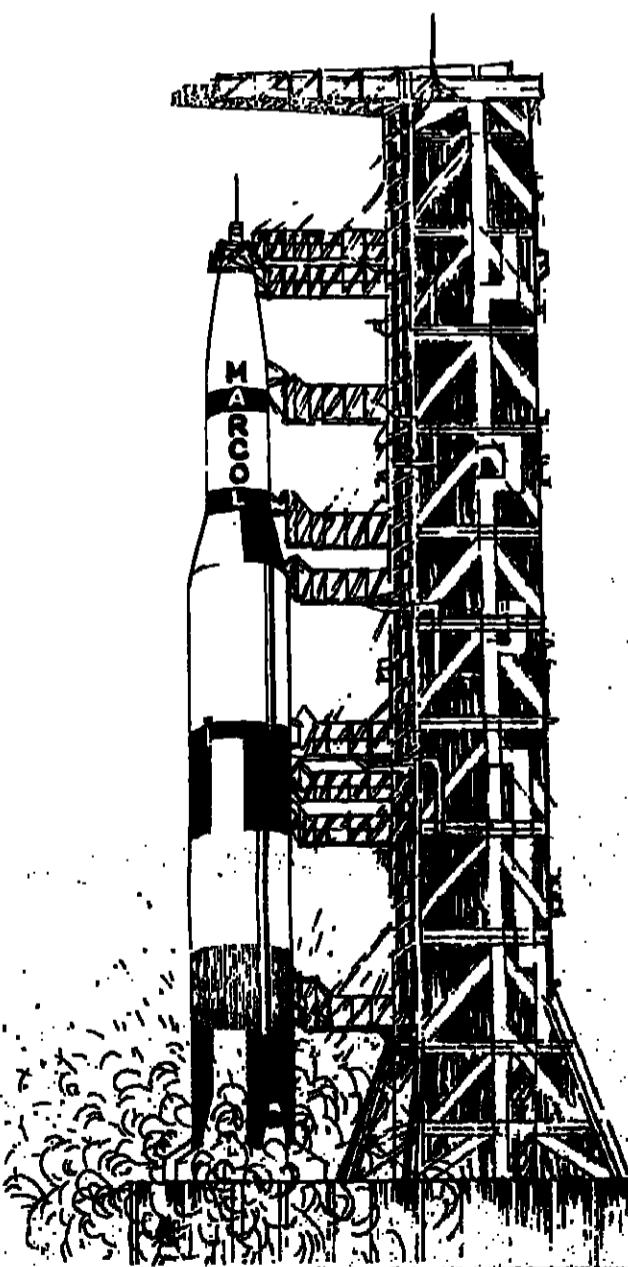
#### Competitive Salaries:

Programmers	..... to £6,500
Analyst / Programmers	..... to £7,500
Project Leaders	..... to £8,500

\*European Assignment allowance is £150 per week.

FOR FULL DETAILS AND A CONFIDENTIAL INTERVIEW PLEASE RING OR WRITE:

DEREK ASHLEY or PENNY BAILEY



Why not join one of this country's leading systems organisations and gain the rewards your experience deserves in 1979.

We are expanding our business base, both in the U.K. and Europe\* and require decisive and dedicated people to join new and existing projects.

Whether you are looking to gain general experience or wish to specialise in a particular field, Marcol is definitely the company for your future.

MARCOL

Total capacity from the 60 Queen's Gardens, London W2 3AF. Tel: 01-402 9355 (24 hours)

## IS YOUR CONTRACT AS GOOD AS THIS?

1. BASIC SALARY — £6.5K-£7K
2. GUARANTEE — £3K
3. COMMISSION — 3% upwards
4. TARGET EARNINGS — £15K plus
5. QUOTA SALES TARGET — £15K
6. COMPANY CAR PLUS FULL TERRITORY EXPENSES
7. MANAGEMENT IN SIX MONTHS — IF YOU MEET QUOTA
8. PRODUCT — The Largest Selling Mini Computer World Wide
9. THE COMPANY — A Multinational British Group
10. THE APPOINTMENTS — New and Due to Expansion
11. SALES SUPPORT RATIO — 4:1
12. SALES BACKING OF — Seminars, Exhibitions, Mail Shots, Advertising, Installation, Support
13. TERRITORY — City-based — Central London — and Large Bucks.-based — Home Counties — and Large
14. RESTRICTIONS — No Named Accounts, No Vocational Limits
15. ACTION — Phone to discuss and fix interview. Ref. MMH.

YES  NO



INSIGHT MARKETING & PERSONNEL  
CONSULTANTS LTD.  
72-75 MARYLEBONE HIGH STREET  
LONDON W1M 4AJ Tel: 486 5644



## £10K - £12K PLUS BONUS OF £1K - £4K

### KUWAIT

The Company is a substantial trading organisation based in Kuwait and who market their products in the Gulf States. Equipment agencies include: Caterpillar, Volvo, Koehring, SKF, Barber Greene, Raygo, Crane Fruehauf, Unilovor, Rowntree Mackintosh, General Electric, 3M, Burroughs.

They have recently launched the Burroughs B80/B800 B1700/B1800 range of equipment and are to appoint:

### SENIOR SALES REPRESENTATIVE

3 YEARS' EXPERIENCE B1700/B1800  
Some experience in the use of DMS II  
Aged 24 upwards — married or single

Capable of installing B1800 with minimum technical advice  
Some experience in the use of NDL  
Some Supervising experience

2 YEARS' PROVEN EXPERIENCE — B1700/B1800 2 years' COBOL EXPERIENCE  
B80/B800

Some training experience Age 22 upwards — married or single

The positions are permanent and include benefits such as:

Tax Free Income  
Travel Assistance where appropriate  
Free Accommodation or Housing Allowance

35 days' Holidays  
1-4 months' Bonus  
Company Car or Car Allowance

Please or write for a full job specification and interview. Ref. MMH.  
INSIGHT MARKETING & PERSONNEL  
CONSULTANTS LTD.  
72-75 MARYLEBONE HIGH STREET  
LONDON W1M 4AJ Tel: 486 5644

The Specialists in Computer Engineering Opportunities of ALL  
Disciplines



INSIGHT MARKETING & PERSONNEL  
CONSULTANTS LTD.  
72-75 MARYLEBONE HIGH STREET  
LONDON W1M 4AJ Tel: 486 5644



## ATTENTION ENGINEERS — COMPANY CAR PRE/POST SALES SUPPORT ANALYSTS — ANALYSTS “SALESMEN ARE TRAINED — NOT BORN”

An Old Cliche, but very true — Take, for example, the following:

- A. — Ex Engineer — Now running own Company worth £12 million.
- B. — Ex Analyst — 3 years in Sales, now Sales Manager earning c. £15K p.a.
- C. — Ex Analyst — 18 months in Sales earning c. £12K p.a.
- D. — Ex Engineer — 6 months in Sales earning c. £12K p.a.
- E. — Ex Programmer — 4 years in Sales earning £25K p.a.

We could go on; in fact, approximately 30% of all Salesmen we place have never sold before, and in most cases they had not even considered a career in sales — until they met with I.M.P.C. A large proportion of our success is due to our expertise in identifying potential salesmen. We have many clients, one in particular, who is prepared to offer training of up to six months' duration in order to capitalise on your potential. They are a multi-million pound company to the forefront of the computer industry, who offer probably the most professional training scheme in Europe.

The investment our clients are prepared to make in your future include: a basic salary of between £5K and £7K, substantial income guarantees, Company car, and a genuine income potential of c. £17K after training.

Ideally, we are seeking candidates aged between 22 and 30, articulate, numerate and "open minded" enough to talk to our career advisor. You will be given an immediate assessment and, if successful, an introduction to our clients. This is an Outstanding opportunity for successful candidates to begin a lucrative and exciting new career.

Telephone NOW for an appointment quoting ref. no. DVW 79/3.

INSIGHT MARKETING & PERSONNEL  
CONSULTANTS LIMITED  
72-75 MARYLEBONE HIGH STREET  
LONDON W1M 4AJ  
Tel: 486 5644



### EXPERIENCED SOFTWARE ANALYST/PROGRAMMER

Circa £6,500 pa  
Surrey / Sussex / Hampshire Border

We have a vacancy for a Software Analyst/Programmer with a minimum of 3 years' Cobol Programming experience, including Burroughs large systems DMSII and GEMCOS. Candidates must be willing to work on call and work considerable overtime.

Duties include programming of utilities and software aids, in the Burroughs 6800 environment.

Fringe benefits include membership of the ICI Pension and Profit Sharing Schemes, restaurant and recreational facilities.

Please apply to:  
Mr. P. J. Thomas, Personnel Officer, ICI Plant Protection Division  
Fernhurst, Haslemere, Surrey

Tel: Haslemere 4081

 Plant Protection Division

### INFOTECH NEEDS YOU

Infotech Design Technology is the world's leading methodology for producing systems and programs from requirements specifications. To maintain and extend our success, we need a

#### SALES EXECUTIVE — £12K

To tell DP management, both in the UK and abroad, about the advantages of Infotech Design Technology. You must understand the programming environment, and be able to talk convincingly at all organisation levels.

- up to £12K remuneration package
- a company car
- opportunity to travel abroad
- a unique product which is achieving world wide acceptance

#### LECTURER/CONSULTANT

To teach the theory and the practice of Infotech Design Technology, to provide on-site support to users of the technology, and to develop new ideas that will keep Infotech and yourself ahead of the rest. Programming experience is essential, knowledge of data-structured design methods would be an advantage.

- up to £8K salary
- opportunity to travel abroad
- exposure to a variety of customers and applications

 IML Infotech Methods Limited  
Nicholson House Maidenhead Berkshire SL6 1LD England Telephone Maidenhead (0628) 35031 Telex 84731

Infotech Design Technology ensures that you achieve the right system and programs for their needs, on time, every time. This methodology results in:

- systems and programs that work first time
- accurate documentation
- precise project control
- easier enhancement
- flexibility in allocating staff
- language and hardware independence

Both of these positions are based in Maidenhead, an attractive residential area on the Thames, within easy reach of London via the M4 or British Rail. The future with Infotech is limited only by your own imagination. Telephone Major Wainright on (0628) 35031 to discuss how you and Infotech can work together.

### Systems Co-ordinator

Central Lancashire, to £7,000

Managing Director, the Systems Co-ordinator will liaise with outside consultants and bureaux, and with the departments concerned, to ensure the success of this exercise. Additional responsibility will be for the installation of the hardware. The company, which will install a computer later in the year, is undertaking a comprehensive review of its operational systems and has created this new position to co-ordinate the design, development and implementation of the new systems. Reporting to the

C. G. Moores, Ref. 24750/CW

Male or female candidates should telephone in confidence for a Periodic History Form to:  
MANCHESTER: 061-236-8981, Sun Life House, 3 Charlotte Street, M1 4HB

  
Hoggett Bowers  
Executive Selection Consultants  
BIRMINGHAM, CARDIFF, GLASGOW, LEEDS, LONDON, MANCHESTER, NEWCASTLE AND SHEFFIELD

#### WAYNE KERR

(Wilmot Broaden Electronics)

Durban Road, Bognor Regis, require the following additional staff:

#### DEVELOPMENT LABORATORY

##### SOFTWARE DESIGNERS/PROGRAMMERS

To join Software development team and work a range of new micro-controlled instruments and test equipment.

Experience of 8080/280 micros, device handling and use of micro-computer development systems is essential. High level languages an advantage.

#### JUNIOR DESIGN ENGINEER, 21-26

Good opportunity for recently qualified/trained engineer to help design advanced micro-controlled instruments. Good career prospects and exciting technical work.

Opportunity also available for suitable Undergraduates for vacation work.

Please apply by telephone or in writing to:

The Personnel Manager  
Wilmot Broaden Electronics Limited  
Dobson Road, Bognor Regis, West Sussex PO22 8BL  
Telephone: Bognor 28811

#### COMPUTER VACANCY

Urgently required Computer

Porgan with ability to operate Honeywell P11 Punch and Honeywell 58 Computer (with ancillary equipment).

Person will be responsible for nursing our aging computer into retirement and effecting a smooth transfer to a modern system.

Salary negotiable.

Adrian M. Chubb,  
TOWNSEND AND  
MERCER LTD  
101 Piccadilly, London W1  
Tel: 01-584 2252

## A CAREER IN INTERNATIONAL BANKING

### The Environment

Chemical Bank is one of the largest banking groups in the world. Within the European area of the International Bank division a systems group has designed and implemented integrated real-time banking systems in seven locations. Further applications are under development to enhance and complement the existing systems which run on the DEC PDP11 range. Systems are developed and maintained by self-contained project teams working to closely defined procedures. Considerable opportunity exists for career development in an exciting and dynamic working environment.

### The Benefits

In addition to the substantial salaries there is a generous package of benefits:

- ★ Subsidised mortgage schemes
- ★ Non-contributory pension
- ★ Profit sharing
- ★ Free life assurance
- ★ Free lunches
- ★ Personal loans
- ★ Interest-free season ticket loans

### The Positions

The following positions will appeal to those with a good educational background and mini-computer experience who can demonstrate a professional approach and are prepared to undertake extensive travel within Europe at the Bank's expense.

### Senior Programmer Analyst Salary circa £8250

- ★ At least two years' experience in structured system design.
- ★ A solid programming background.
- ★ Financial or banking systems experience essential.
- ★ Supervisory experience.

### Programmer Analyst

Salary circa £7500

- ★ At least three years' programming experience.
- ★ One year of structured system design.
- ★ Financial or banking system experience preferred.

### Programmer

Salary circa £5500

- ★ Minimum two years' programming experience.
- ★ Experience in BASIC an advantage.

For further details please write or telephone Mark Irenes. All applications will be treated in the strictest confidence.

Reference CW 419/1

HUTTON EXECUTIVE SELECTION LTD.  
HUTTON HOUSE,  
HUTTON STREET, LONDON EC4Y 8HP.

TELEPHONE: 01-353 7141 (24 HOURS)

**Hutton**  
SPECIALIST RECRUITMENT CONSULTANTS

## Marketing Specialists

Central London based with some European travel  
Salary package circa £10000

Our Clients enjoy one of the best reputations in the world for marketing and training resources. Enhancement of the U.K. Marketing Department has created two further vacancies.

### Product Specialist

To take responsibility for the marketing of a specific product. The job includes pricing, stocking, configuring, creation of literature and sales aids, training, liaison with the Company's European Headquarters, support at large sales negotiations, presentations, analysis of competition and general support at a senior level.

Candidates should have a good knowledge of applications software and operating systems and an appreciation of hardware technicalities and COBOL.

### Application Specialist

To control specific applications areas relating to Trade and Industry and in particular such areas as depot accounting and other distributed data processing applications.

The job involves researching specific applications areas, helping to create packages, planning sales campaigns, training, running sales workshops together with product specialists, supporting large sales negotiations, and generally offering troubleshooting and support back-up at a senior level. Applicants to the job will clearly identify closely with this specification and have the necessary experience upon which to draw.

Applicants to both positions could come from a variety of backgrounds such as sales, marketing, support, software house, large commercial T.P. user etc. Preferred but not essential is an age group of between 28 and 35 and an education to Degree or equivalent.

These are two first class opportunities and interested applicants should contact BOB BOWER Advising Director to arrange an early interview.

Reference CW/219/2

HUTTON EXECUTIVE SELECTION LTD.  
HUTTON HOUSE,  
HUTTON STREET, LONDON EC4Y 8HP.

TELEPHONE: 01-353 7141 (24 HOURS)

**Hutton**  
SPECIALIST RECRUITMENT CONSULTANTS

## Computer Sales Executives

London, Midlands, The North, The West  
Salaries to £8,000 Quota Earnings £20,000

We have been instructed by our Clients to identify the really top-class sales executives of 1978 whose ambition should lead them to even greater things (earnings, responsibilities, benefits etc.) in 1979.

You may not be considering moving from your present company at this time but we would still like to know about you if you are doing well.

You should know exactly what the opportunities are at the moment and we should certainly know if your success and ambition could lead to a better job either now or later.

Make certain that we know about you by contacting Mark Irenes to arrange a meeting anytime between 8 a.m. and 6 p.m.

Reference CW 419/1

HUTTON EXECUTIVE SELECTION LTD.  
HUTTON HOUSE,  
HUTTON STREET, LONDON EC4Y 8HP.

TELEPHONE: 01-353 7141 (24 HOURS)

**Hutton**  
SPECIALIST RECRUITMENT CONSULTANTS

# THORRAR

RECRUITMENT AND CONSULTANCY SERVICES LIMITED

Greenock House 19 Cuckfield Road Hurstpierpoint Sussex

Telephone 0273 833848

Ref. CW/6/79

### SPECIALISTS IN DP AND EXECUTIVE RECRUITMENT

## CAREER-MINDED PROGRAMMERS MOVE ON!—MOVE UP!

Our client operates in a highly user-orientated environment providing sophisticated packaged solutions tailored to meet individual needs. At present they have an ICL mainframe but have recently completed a major review of their computing needs and, in consequence, are planning a replacement within the next few months to provide much increased central processing power. Other developments include the further development of on-line communications facilities with a network and mini computers providing distributed intelligence at remote centres. In preparation for the introduction of the new equipment a number of additional Programmers of varying experience are to be recruited.

### PROGRAMMERS c £4,600

- Up to 18 months solid programming experience required
- Cobol preferred but Fortran or any assembler acceptable
- Any hardware, mainframe or mini
- Commercially orientated
- Knowledge of or exposed to structured programming techniques an advantage
- 'A' level or equivalent education desirable

### JUNIOR PROGRAMMERS c £4,000

- Ideally with 6/12 months' practical programming experience
- Computer Science Graduate acceptable, especially those with industrial experience
- Retraining to Cobol provided in appropriate cases
- Any hardware
- Commercial awareness useful

PLEASE WRITE OR TELEPHONE NOW TO MAKE IMMEDIATE ARRANGEMENTS FOR INTERVIEWS TO TAKE PLACE IN LONDON OR THE SOUTH — OR IF MORE CONVENIENT TELEPHONE JACK COLLINGS BETWEEN 7 P.M. and 9 P.M. WEEKDAYS OR WEEKENDS ON (0273) 400880



## EUROPE'S LEADING SPECIALIST RECRUITMENT CONSULTANTS

### CHIEF PROGRAMMER SAUDI ARABIA

around £14,000 TAX-FREE renewable contract

+ COMPANY CAR + TERMINAL BONUS + SCHOOLING ALLOWANCES  
+ FULLY FURNISHED FLAT (married/single) + FREE UTILITIES

THIS OUTSTANDING PACKAGE offers the opportunity to make considerable savings while working on fourth generation equipment.

OUR CLIENT is a national bank, which has recently installed an NCR Criterion mainframe after undertaking a thorough feasibility study. Further computers will subsequently be installed. The D.P. Department has been established with U.K. staff, but the post of Chief Programmer remains vacant.

ENVIRONMENT. The country is politically stable and the economy very strong. The climate is hot, but air-conditioning is normal. While facilities are limited, such sports as fishing, swimming and riding are available, and there is scope for adaptable individuals to enjoy an active social life within the large expatriate community.

A SELF-CONTAINED FLAT is provided, this being furnished to a high standard (including freezer, cooker, iron and cutlery).

GENEROUS SCHOOLING ALLOWANCES are given, a local English school offering good education up to the age of eleven.

#### RESPONSIBILITIES:

All aspects of the supervision of a team of live expatriate programmers and several locally recruited trainees.

#### REQUIRED PROFILE:

- 1 Minimum of 7 years' programming including good COBOL, utilising advanced operating systems
- 2 Experience of leading a programming team
- 3 Knowledge of on-line systems

WE WOULD ALSO be interested in talking to candidates for the post of Senior Programmer. Salaries are reviewed annually.

PLEASE TELEPHONE without delay on 01-540 8311. DPSC Group Ltd., Crown House, Morden, Surrey.

Crown House Morden London SM4 5EU

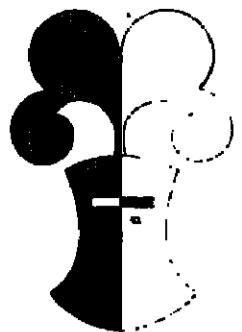
consultancy division

01-540 8311

24-hour answering service

11/1/78

Ref. CW943



# KNIGHT PROGRAMMING SUPPORT LIMITED



## CONTRACT MIDLANDS & N. ENGLAND

IBM CICS PL/1 PL1 PROGRAMMERS	... c.£230
NORTHWEST, MIDLANDS	
370 COBOL PROGRAMMERS	... c.£220
MIDLANDS, NORTH	
IMS DB/DC PL1 PROGRAMMERS	... c.£230
MIDLANDS, NORTHWEST	
IMS COBOL PROGRAMMERS	... c.£230
MIDLANDS	
370 PL1 PROGRAMMERS	... c.£220
NORTHWEST, MIDLANDS	
CICS COBOL PROGRAMMERS	... c.£230
NORTH, MIDLANDS	
HONEYWELL L66 PROGRAMMERS	... SCOTLAND
HONEYWELL COBOL PROGRAMMERS	... MIDLANDS, NORTHWEST, SCOTLAND
UNIVAC COBOL PROGRAMMERS	... MIDLANDS
POP 11 BASIC PROGRAMMERS	... MIDLANDS, NORTHWEST
OTHERS	... c.£220
	c.£220
	c.£220
	c.£230

- ★ High remuneration assured throughout the year
- ★ Security of employment from continuity of work
- ★ Career development from learning new DP techniques
- ★ Overseas opportunities
- ★ Financial advice in all matters of taxation, mortgages, pensions

## PERMANENT NORTHERN OPPORTUNITIES

### COBOL and SYSTEMS PROGRAMMERS

LEEDS to £5712

A lucrative self-financing productivity payment is offered by our client. They are now operating ICL 1900's under GEORGE 3 and are installing a 2972 and 2900 to be run under VMEB. Our client requires programmers with COBOL experience, also systems programmers for a technical support team.

Ref: 1071 and 1075

### IBM PROGRAMMER

NORTHWEST c.£5000

Our client, a company situated on the Lancashire coastline, are building a new plant. Due to this expansion they require programmers with a minimum of two years COBOL. Experience of CICS and DATA BASE PL1 would be an advantage. Work involves varied commercial applications.

Ref: 1064

### SENIOR SYSTEMS ANALYSTS

NORTHWEST to £6237

The company are at present on an overloaded 1904s and are converting to a 2972 and a further 2900 is to be installed, that will run under VMEB. Analysts are needed immediately on the investigation design and specification for new applications and for further developments of existing system. Lucrative company benefits offered.

Ref: 1074

PROGRAMMER  
LIVERPOOL to £6000

Benefits from this company include an annual bonus, a non-contributory pension scheme, flexi time and luncheon vouchers. ICL 2904, COBOL and EXEC 2 experience would be a definite advantage. Other company hardware includes IBM and HONEYWELL.

Ref: 1063

### SYSTEMS ANALYSTS

YORKSHIRE to £6000

Our client, a rapidly expanding young company, offer a 10% to 15% bonus plus a company car or generous car allowance. DEC PDP 11 experience and knowledge of BASIC+ and RSTS is preferred. Each analyst has a portfolio of clients who he deals with specifically from feasibility to implementation.

Ref: 1048

### PROGRAMMER LANCS to £5000

LANCS to £5000

Our client, an expanding company offer to employees a 3½% mortgage interest rate and a productivity bonus. Programmers with an IBM background and experience of ASSEMBLER or PL1 are required. A VM/CMS interactive programming systems operation where programmers use the computer terminals.

Ref: 1057

FOR DETAILS OF THESE AND OTHER VACANCIES PLEASE CONTACT  
JOAN JOHNSTONE, 143/144 ROYAL EXCHANGE MANCHESTER. TEL.  
NO. 061 833 9341/5.

COMPUTER PERSONNEL CONSULTANTS

## Senior Computer Operator

Candidates for this job should be at Operator or Senior Operator level and should have at least 2 years 1804 range and George 3 experience. A proven high level of understanding of G3 is required.

The laboratory at present runs a 256K ICL 1904S for scientific research work, using both MOP and background. As well as the terminal configuration, a network of mini computers is connected to the 1904S.

In the near future a second 1904S will be added, accessing the same file store.

PHILIPS Research Laboratories

## Programming ... West Germany ... and £10,000-£12,000 p.a.

### An international opportunity for talented programmers

Sandvik GmbH, Dusseldorf, is the German sister company of Sandvik U.K. Limited and part of the international Swedish group engaged in a wide range of engineering activities.

The appointment of a Programmer in Dusseldorf offers an outstanding career opportunity for either a young high-flyer or a more experienced person with real talent to progress within the framework of the Sandvik organisation. The hardware is an IBM 370/168 with a disc operating system, and work involves EDP applications in the commercial range, processing, despatch and involving.

Salary will be equivalent to £10,000-£12,000 p.a. and additional benefits, which are those expected of a major international group, include generous assistance with relocation expenses. An initial interview will be held in the UK at Sandvik (Halesowen), please write or telephone for an application form in the first instance to:

David Davis, Personnel Manager, Sandvik U.K. Limited, Manor Way, Halesowen, West Midlands, B62 8QZ. Telephone: 021-560 4700.

SANDVIK

CAPP ASSOCIATES group provides permanent and contract recruitment services to clients and applicants

**Noble Lowndes**  
is not just a famous name  
it's:

- 3 PENSION PLAN DESIGN
- 3 COMPUTER-BASED ADMINISTRATION
- 3 EXPERT REGIONAL SERVICE
- 3 TECHNICAL ADVICE
- 3 INVESTMENT PERFORMANCE MEASUREMENT
- 3 INTERNATIONAL EMPLOYEE BENEFITS
- 3 CORPORATE TRUSTEESHIP
- 3 COMMUNICATION PROGRAMMES
- 3 EMPLOYEE BENEFIT STATEMENTS
- 3 PERSONAL FINANCIAL ADVICE
- 3 PROFIT-SHARING SCHEMES
- 3 MANAGEMENT INCENTIVES

**Noble Lowndes**  
and Partners Ltd.

## ANALYSTS to £6500 PROGRAMMERS c. £5000

*A successful past leads to a successful future*

For more than 40 years Noble Lowndes and Partners have been pioneers and market leaders in their field. Computing has played an integral part since 1959. Analysts and Programmers joining this installation will therefore have the security of working for a highly successful organisation and the interest that the future will bring through the company's determination to stay ahead.

Currently the DP department, which is based in Croydon, is small but utilising large IBM 370 hardware operating under MVS. Current plans include the introduction of distributed processing, database systems, and word processing.

**Analysts** should have a broad commercial background. Training will be provided in specific technology and applications.

**Programmers** should have a good COBOL background. IBM knowledge would be valuable but not essential. On-line program development is utilised.

The essential for both analysts and programmers is the desire to build a career with the company and to work in a growing department. The opportunities are there — maybe you should be too!

Initial applications should be made by telephone or in writing to Capp Associates CROYDON office. Starting salaries will be as shown and benefits are good.

Positions open to male & female applicants, please telephone (24 hour service) for initial discussion or write to address below. QUOTE REF. CW 107.9H.

COMPUTER AND PROFESSIONAL PERSONNEL CONSULTANTS

**CAPP ASSOCIATES**

Computing Services Association

01-686 9693

A.M.P. HOUSE, DINGWALL RD.,  
CROYDON, CR9 2AU

Please note  
new address  
same phone  
number

# MYRIAD

## INTERNATIONAL SYSTEMS IN CENTRAL LONDON OILFIELD SERVICE INDUSTRY

### ANALYST/PROGRAMMER-MINIS To £6500

This position requires an enthusiastic person, with drive and good communicative skills, to be responsible for the design and subsequent implementation of a major, international system. Joining the 'mini' division in a senior capacity, the successful applicant will have developed systems in a small machine environment (RPG II will be an advantage but is not essential) and will possess proven analysis experience. A variety of systems are being developed and will be implemented initially at sites in Europe.



The possibility of a world-wide network based on IBM System 34 equipment is now being considered and for this reason candidates must be prepared to work abroad occasionally for periods of three to four months.

The mainframe division requires an Analyst/Programmer to develop sophisticated management accounting systems. COBOL Programmers will also be considered for this position and the salary will be circa £6500 depending upon experience.

The company is based in Central London and is within one mile of four British Rail main stations. A season ticket loan is provided along with

To £7500

Programmers with three years' IBM DOS/VS/ASSEMBLER experience, wishing to move into systems programming, will find this opportunity very attractive. The company has a long term development plan for major integrated database and telecommunications systems and the successful applicant will be heavily involved in the design, implementation, and maintenance of these systems. He/she will gain a thorough knowledge of IBM software and can expect a most satisfying career. Full training will be given.

The company, part of one of the world's fastest growing and most profitable corporations, operates several 370s, and has a network of IBM System 34s on order. Future development plans are likely to require hardware upgrades.

Ref: S2/2601

### MOVE INTO SYSTEMS PROGRAMMING

INTERNATIONAL SYSTEMS IN  
CENTRAL LONDON  
OILFIELD SERVICE INDUSTRY

### ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-MINIS To £6500

INTERNATIONAL SYSTEMS IN

CENTRAL LONDON

OILFIELD SERVICE INDUSTRY

ANALYST/PROGRAMMER-M

# MYRIAD MITCHAM

Our client is seeking to expand its small data processing department by recruiting three systems and programming professionals. Operating a recently installed ICL 2904 with 20 VDUs the company is keen to develop additional systems, both on-line and batch. Applicants with experience of on-line systems using MTS will be of particular interest.

## SYSTEMS ANALYST

To £6,500

Candidates will have developed a system from feasibility study to final implementation and will be able to write clear reports and specifications and handle all aspects of systems work in a busy and varied environment. Reporting to the DPM, the Systems Analyst will work closely with users and will be responsible for project control.

## SENIOR PROGRAMMER

To £6,500

To head up the programming group the Senior Programmer will have programmed for 4 years, recently on ICL equipment and possess a strong COBOL knowledge. The successful applicant will be responsible for the progress and quality of all programming work and will define standards and advise on languages and utilities.

## ANALYST/PROGRAMMER

To £6,000

This position requires a COBOL background coupled with analysis involvement, preferably at an ICL installation. Programming both batch and on-line systems in COBOL and Fortran. The Analyst/Programmer will work closely with colleagues on a variety of commercial/industrial systems and will be fully trained in appropriate areas.

Persons joining the department now can expect a most interesting and rewarding future as the company is fully committed to increasing DP applications as new technology becomes available.

**MYRIAD APPOINTMENTS LIMITED**  
30 Fleet Street London EC4Y 1AA  
01-353 0981 (24 HOURS)

### Ambitious Analyst?

London,  
Manchester,  
Leeds.

Over  
£6,000+car.  
Freedom.  
Mobility.  
Responsibility.

Become a key  
individual in the fastest  
growing minicomputer  
company in Europe.  
Contact Tim Davies  
for the facts that matter.

0992  
50541  
The Technical People

UNIVERSITY OF  
LIVERPOOL  
DEPARTMENT OF  
PHYSICS

To assist Academic Staff engaged  
in research on Solid State Physics.  
PDP 18 and an IBM 360/65  
There are links to the S.R.C. large  
computers.

Successful candidate will be required  
to assist the provision of  
programmes for collection and  
surveillance of data in real time  
and for its use in the development  
of a computer programme. Degree  
or equivalent essential. Salary  
according to age and experience,  
on scale for Experimental Officers  
(up to £5,604 p.a.) or Senior  
Experimental Officers (up to  
£6,565 p.a.); these scales are  
under review.

Application forms from The Regis-  
terer, The University, P.O. Box  
147, Liverpool L69 3BX.  
Quoic Ref: RV/16/H/CW

# William Key Senior Operations Opportunity

South London

Salary range £6,000-£7,700

Our client, a large public service company based just south of the Thames is seeking a Senior Development Interface Analyst to run a small specialist team within the Operations Division.

The main objective is to set up and maintain high professional standards in certain operational areas including handover procedures for new and amended applications; disk space management, system integrity and security, hardware evaluation and resource allocation and control. A vital interface is the close liaison with Planning and Development staff in all stages of systems development to ensure that Operational Standards are observed and that applications can be accommodated within the available resources.

The Company operate twin IBM 370/158 processors under OS/VS with wide range of peripherals, including a large network of 300 remote terminals supported via CICS/VS. This is a non-shift position, but carries the responsibility for an evening standby support service on a rota system, for which appropriate allowances will be paid.

This is an exceptional opportunity for candidates with strong IBM operations experience both to obtain a good position within a progressive Operations Department, and to widen their scope for future advancement in an organisation determined to provide full career paths for Operations Staff.

The appointment will be made according to age and experience, in the range of £6,000 to £7,700 (under review shortly). Company benefits include at least 23 days annual leave, subsidised restaurant facilities and a low interest season ticket loan scheme.

Your INTERVIEW can be arranged now by telephoning Richard Bulgin on 01-493 2947 (day) or Birkhampton 76143 (evenings/weekends) or by writing to William Key & Partners FREEPOST 4 London W1E 8UZ (No stamp required).

Ref. CW973

WILLIAM KEY & PARTNERS • 4 HALF MOON STREET, LONDON W1  
Computing Services Association

## SENIOR SYSTEMS PROGRAMMER (OS/VS)

£10,000 PLUS SUBSTANTIAL BONUS

★ Surrey Based ★

★ European Travel Opportunities ★

This company is of US origin and has been operating very successfully in Europe since 1976. It is small, but has derived its success from its well-known state-of-the-art program product. This product has been installed in many of the largest and most prestigious 370 installations in Europe.

Reporting directly to the Chief Executive, the job will be to support and enhance the product, and this will involve spending up to 30% of your time away from base. Success will depend on:

- Your being able and happy to work on your own initiative in the environment of a small team.
- Recent, in-depth knowledge and experience of OS/VS systems programming.
- Your ability to work well with customers. If, in addition, you can offer TP and/or PL/1 so much the better.

This is an exciting opportunity for a go ahead Systems Programmer to spread his wings, participate in the development of a company and reap the financial rewards.

Contact: Tony Baker (01-499 4501)

Ref. RW 4/1

# INTERNATIONAL BANKING PROGRAMMING

Up to £7,750 + Banking  
Benefits Package

(depending upon experience)

Here at last is an organisation who want good programmers who mean to stay with programming. Not only would they like you to stay with programming, they offer the following incentives to do so:

- ★ IBM training in System 34.
- ★ Training in RPG II.
- ★ On-line Programming.
- ★ Training in Communications Software.
- ★ Planned installation of System 38.

A solid DOS / BAL background is the essential qualification for these two positions, experience of RPG II and On-line Programming would be an advantage.

In addition to the salary offered the substantial benefits package includes a subsidised mortgage after a qualifying period. Working in a small professional environment you can guarantee staying on top of hardware and software developments.

Phone me, GEOFF MARSH on 01-499 4501 to find out how.

Ref. RW 4/2

## CONTRACTS

### LEVEL 66 OPS STANDARDS

Berkshire/Germany

Join a small team of operations experts compiling and testing Operating Standards. Some travel to Scotland and Germany will be involved.

### PROGRAMMER/ANALYST

London

1900/2904, Cobol, on line experience. Immediate start. 9 months.

### PDP BASIC/PROGRAMMERS

London

To develop software on Micro systems. Starting soon.

### ANALYST/PROGRAMMER

N. London

ICL/IBM Cobol. Good knowledge of Accounting Systems. Start soon.

### PROGRAMMER

Central London

Minimum 4 years PL1/IMS DB/DC or 3790 experience.

Call BRIAN DAWSON on 499 4501 for details of these and other contracts available with HUTCHINSON SCOGGINS CONTRACTS LIMITED.

If you are thinking of becoming a Contractor in Operations/Programming/Analysis, HUTCHINSON SCOGGINS CONTRACTS LIMITED will be pleased to assist and advise you. Call 01-499 4501 now.

Ref. RW 4/3

## SENIOR SYSTEMS ANALYST

to £10,000 p.a.

+ MORTGAGE

### - OTHER EXCEPTIONAL BENEFITS

A forward, dynamic individual is sought to help spearhead development projects with this major international bank.

The post demands a flexible all-round professional who can lead projects and equally well perform analysis, design and program specification tasks. Departmental supervision will not be part of the Job Specification, but the person appointed will be given the necessary authority to be accountable for successful implementation on time and within budget.

Candidates should have a minimum of 8 years in data processing with at least four of these spent in Systems Analysis. They must be user oriented and open minded enough to desire the optimum solution to the users' problems.

If you can demonstrate to why this post should be yours, call me now and arrange an early meeting.

Call GEOFF MARSH on 01-499 4501.

Ref. 4/4

**hutchinson-scoggins recruitment**

47/48 New Bond Street (Entrance in Maddox Street)

London W1Y QHE Telephone 01-499 4501

*Scoggins*

### BETTERWARE

Ruislip, Essex

#### DATA PROCESSING OFFICE MANAGER

The Job:

• manage and maintain office procedures

• control and motivate office staff

• liaise with suppliers of equipment and services

• assist in development of new microprocessor systems

• to assist in programming office computers in BASIC/COBOL

• Salary negotiable depending on experience. Excellent fringe

benefits, car or van and pension scheme

Conduits, car or van and pension scheme

and 20 days holiday plus bank holidays

and 2 weeks annual leave

and 2 weeks annual



# MYRIAD OPERATIONS

Computer Personnel Consultants

## PRODUCTION CONTROL & OPERATIONS

S.W. LONDON'S Foremost DUAL 2960 Installation: To £4500 + Shift

Several excellent opportunities currently exist within one of the most advanced ICL 2900 installations in London. The present configuration consists of dual 3Mb 2960's running under DME and VME/B, with two communications processors controlling a T.P. network of terminals throughout the U.K., handling input and enquiries from regional offices. Conversion from the previous ICL 1900's is well advanced and the new machines are due to go live in May, following which a number of new applications have been identified for development.

**PRODUCTION CONTROL:** Five first-class vacancies exist for a Control Supervisor and four Controllers. These have arisen as a result of a major revision and expansion of the control department and its function. Apart from providing the primary user interface the team is also responsible for the maintenance of job control and the retrieval of run error situations. The Control Supervisor should be able to offer three years, or more, experience in a production environment using any manufacturers' hardware. The Controllers will offer experience in excess of one year, coupled with the enthusiasm and drive necessary to succeed in a technically sophisticated and demanding installation.

**OPERATIONS:** This is a rare opportunity for a keen Senior Operator, with a minimum of two years' experience on ICL 1900 hardware, preferably using Manual and GEORGE II, to move into an advanced 2900 installation. As a key member of a small team the person appointed will be responsible for ensuring efficient throughput to schedule, and will be expected to become fully capable of tracing and fixing most system failures.

At present both Production and Operations teams work on a two shift basis for which a 12½% premium is paid. A range of fringe benefits is also offered which make these outstanding opportunities particularly valuable to persons seeking a rewarding career within the D.P. industry.

Ref. SW2/2501

24-hour answering service

Please telephone for a confidential discussion or write to:

30 Fleet Street London EC4Y 1AA  
01-353 0981

## PROGRAMMER / ANALYST

Berkshire £6,000+

A graduate with around two years' commercial or technical experience is required to work for the Computer Division of a specialist petroleum consultancy. A knowledge of technical languages (e.g. Fortran, Basic) would be an advantage, and the appointee will be expected to learn MUMPS.

The office is only five minutes' walk from Ascot station and has a PDP 11/34 installed. There may well be some opportunity for overseas travel, particularly to Germany and the Netherlands.

Please telephone for an application form or write with full details of your career to date.

Petrodata Systems  
11 High Street, Ascot  
Berks, SL6 7JE  
Tel. (0890) 24731/23778  
(Ansafone out of hours)

## Successful Peripheral Salesmen - Are you where you want to be?

Probably not if you are employed by a sizeable organisation. For although you have sold effectively for 3-5 years, you are still one of many, who are going nowhere.

We are recruiting for a Company, who in Europe are leading peripheral suppliers. After three years operating in the U.K., they are on target. The future depends on people like you, which means you can control your own destiny.

To arrange an immediate interview, telephone CLIVE HARRIS on 01-402 9332 (During the day) or CRAYFORD 51464 (7 p.m. 9 p.m.), quoting REF: CRR 25.

For further information about any of the above vacancies please write to Chris Wilson or Mike Bowley.

Sanderson  
EXECUTIVE RECRUITMENT  
TELEPHONE 0272 39302

## Chief Applications Programmer

Applicants should be fluent in FORTRAN and have knowledge of some relevant applications packages.

## Chief Program Adviser

Applicants should be able to program in at least two languages, FORTRAN, COBOL, BASIC, or ALGOL and have experience in dealing with software.

The Department provides a service to the Polytechnic based on the DEC 20 timesharing machine plus PDP 11/40 and a Data General Nova.

Salary for both posts: £6,000 scale £10,200-£16,250 plus a supplement of £312.

Further details and form of application available from the Assistant Director and Chief Administrative Officer, Trent Polytechnic, Burton Street, Nottingham. Closing date: 8th February 1979.

TRENT POLYTECHNIC NOTTINGHAM

## Sales Executives

Computer Peripherals and Data Logging Systems

Home based £5,500 basic + commission (no limit) + car.

Are you a young ambitious salesman with a good proven sales record plus a background in data processing and electronics? Then this could be your next step up.

Cristie Electronics Ltd., an established young expanding company, have recently launched two new microcomputer based products—an intelligent cassette terminal and a portable datalogger. Two self-motivated salesmen are needed to sell these products throughout the UK. Promotion prospects are wide open to Director level.

If you know you have the dynamism and background to meet the challenge,

Telephone: John Scott, Gloucester (0452) 35528  
PER Grosvenor House  
Station Road, Gloucester GL1 1TA

Cristie  
Professional Executive Recruitment  
Applications from both men and women are welcome.

## HAMPSHIRE / DORSET

### HAMPSHIRE

Pro. Lnd (NCH)	C1BK	CETC
Snr. Anal. (ICL)	C1GK	To LDR
Anal. Prog. (Colb)	C1GK	CEIR
Snr. Anal. (Min)	NQG	CSKA
Anal. Enq.	C1BK	
Snr. Prog. (Basic)	C1BK	
Snr. Prog./Anal (PDP 2)	C1DWK	

Sales Eng: North UK	GL1OK	CETC
Anal. Prog. (PDP 2)	GL4/4K	To EDR
Software Prog.	GL4/4K	CEIR
Snr. Prog. (Colb)	C1BK	CETB+Monroe

Snr. Anal. (ICL)	C1BK	CEIR
Anal. Prog. (Colb)	C1BK	CEIR
Pro. Load (IBM)	CEIR	No

For further information about any of the above vacancies please write to Chris Wilson or Mike Bowley.

Sanderson  
EXECUTIVE RECRUITMENT  
TELEPHONE 0272 39302

## datron

PLASTRONICS LIMITED

Software Engineers

- up to £7000

Continuing company expansion and several exciting new projects in advanced electronic instrumentation have created new opportunities for experienced software engineers to join our R & D team.

As a young and well managed company, already established in the world leader in precision DVM's, we offer every encouragement including working freedom and outstanding career opportunities - to successful applicants.

If you have an innovative and ambitious mind, plus a minimum of micro experience and a degree or diploma, £7,000 plus other benefits.

If you know you have the dynamism and background to meet the challenge,

Telephone: John Scott, Gloucester (0452) 35528  
PER Grosvenor House  
Station Road, Gloucester GL1 1TA

Cristie  
Professional Executive Recruitment  
Applications from both men and women are welcome.

## SYSTEMS PROGRAMMER

The Daresbury Laboratory, an establishment of the Science Research Council, situated in the north Cheshire countryside is constructing a Nuclear Structure Facility. Known as the NSF, the project is based on a tandem electrostatic accelerator which will be the largest in the world. When completed it will provide a facility of world standard which will attract users from both the national and international science communities.

The NSF machine represents a significant step forward in the technology of this type of accelerator and requires a powerful computer control and monitoring system. It is in fact the first accelerator of its type to be designed with comprehensive integral computer control.

The control system is based on a central Interdata 7/32 computer with up to 10 peripheral Interdata 7/16 computers. A vacancy exists for a Systems Programmer to join a small team of computer professionals designing and producing the software to control this network. Many problems associated with interactive colour displays, plain data handling and the operator interface, made particularly challenging by the distributed nature of the system, remain to be solved and a considerable amount of programming in both high and low level language will be required to complete the system. The post will provide a sound base for a career in computer control systems in general.

Applicants must possess a good honours degree or equivalent and experience in systems programming. The appointment will be made either at Scientific Officer or Higher Scientific Officer level according to qualifications and experience on the following salary scales:

Scientific Officer £2,839 to £4,156

Higher Scientific Officer £4,101 to £6,448

There is a non-contributory superannuation scheme, a generous leave allowance and a flexible working hours scheme.

Closing Date: 16th February 1979

Write or telephone 0925 65000 Ext. 467, for an application form quoting reference Number DL/644/1/BV In.

The Personnel Officer

## DARESBURY LABORATORY

Science Research Council  
Daresbury, Warrington WA44AD



Computer Recruitment  
A division of ATA Selection and Management Services,  
recruitment consultants to industry and commerce since 1962.

## SYSTEMS ANALYSTS c.£5,500 p.a. GLASGOW

Our clients, the Management Systems Division of a major engineering group wish to recruit a number of systems analysts.

The successful applicants will be educated to degree level or equivalent and have at least three years' experience of systems analysis gained preferably in an engineering or management systems environment. Programming experience though useful is not essential.

The salaries are negotiable around £5,500 plus normal large company benefits including an excellent relocation package.

For further information contact

H. W. Clark  
Manager  
ATA COMPUTER RECRUITMENT  
Anglia House  
24/26 Fradock Street  
Edinburgh EH2 2JR  
Tel: 031-226 5381 (reverse charge)

Normal business hours: 9.00 a.m.-5.30 p.m.  
Monday, 29 January 9.00 a.m.-8.00 p.m.  
Tuesday, 20 January 9.00 a.m.-8.00 p.m.

LONDON (01) 637 0781 MANCHESTER (061) 832 5856 BIRMINGHAM (021) 643 1994  
BRISTOL (0272) 211035 EDINBURGH (031) 226 5381 CRAWLEY (0293) 514071  
SOUTHAMPTON (0703) 37555

## Technical Author

Atkins On-Line is a fast-growing computer services bureau with a network of offices extending throughout the U.K., U.S.A., Canada and Holland. We currently have a rewarding opening for a Technical Author who will prepare documentation to assist clients in using our computer programs, and our timesharing and remote batch services.

The successful man or woman will liaise closely with computer programmers to understand programs and how to use them. Armed with this information he/she will write manuals, user guides, workbooks and other documentation to guide clients in the use of our products and services.

Candidates should be able to write in good, clear and concise English and be able to understand the difficulties clients might experience in using computer programs. He/She should have a quick, logical mind and a broad experience of business, industry and engineering. Some knowledge of computers and timesharing would be an advantage.

In addition to an attractive salary, we offer good conditions of employment and benefits including an excellent pension scheme and relocation expenses if applicable.

For further details please telephone  
Helen Hackett,  
Personnel Manager,  
Atkins On-Line Ltd.,  
Fourmost House,  
12-22 West Street,  
Epsom, Surrey.  
Tel: Epsom 29678



## Computing Services Operators

Educated to 'A' level standard. Knowledge of Univac or IBM JCL, experience in data control and terminal or main frame operating would be an advantage.

Our sophisticated remote processing systems require a three shift cycle operation.

Annual remuneration, inclusive of allowances, would be in the region of £4,500.

- \* First class working conditions
- \* Free meals
- \* Four weeks annual leave
- \* Sports and social facilities

Telephone or write for an application form to:  
Shell International Petroleum Company Limited, Shell Centre, London SE1 7NA. Telephone 01-934 2828.

## FORTRAN

### FOR THE BEST JOBS IN THE SCIENTIFIC AND TECHNICAL COMPUTING FIELD — CONTACT US NOW!

As a specialist agency in the Engineering, Scientific and Technical industry we now deal with over 4,000 companies throughout the U.K. and abroad. Applications from Universities, Polytechnics, Colleges, Research Establishments, Manufacturing and Service Industries, Government Departments and other organisations.

As specialist agents in the Engineering, Scientific and Technical industry we now deal with over 4,000 companies throughout the U.K. and abroad. Applications from Universities, Polytechnics, Colleges, Research Establishments, Manufacturing and Service Industries, Government Departments and other organisations.

Candidates should have considerable background in scientific computing, ideally experience in COBOL, FORTRAN, BASIC, PASCAL, C, PL/I, FORTRAN IV, CTR, Fortran 77, and various subroutines.

The successful candidate will have a statistical background and will advise clients in the use of statistical packages such as SPSS, SAS, BMD, GLIM, CLUSTAN, etc. as well as basic statistical techniques. Other duties will include the writing of application programs and program library maintenance.

Candidates should have a good degree, a good grounding in applied statistics and a good knowledge of a high level language, preferably FORTRAN.

Salary on the Academic Related 1B Scale £3,604-£6,004 (plus 10%)

Applications from both men and women are welcome. Please apply to: Mr. G. J. Smith, Director of Personnel, Datron Plastics Ltd., 206 George Street, Edinburgh, EH2 4LT, Scotland. Tel: 031-226 5381. Closing date: 16th February 1979.

Applications from both men and women are welcome. Please apply to: Mr. G. J. Smith, Director of Personnel, Datron Plastics Ltd., 206 George Street, Edinburgh, EH2 4LT, Scotland. Tel: 031-226 5381. Closing date: 16th February 1979.

## UNIVERSITY OF STIRLING COMPUTER UNIT

requires a

### PROGRAMMER

to join a small team advising clients on the use of computers in the Agricultural, Plant, Chemical and Metallurgical industries.

The University of Stirling, Edinburgh, Glasgow and Dundee are linked by BSCM telecommunications links. Applications for permanent posts through network arrangements include ICL 2800 and 2936 machines at Edinburgh, 1600 machines at Dundee, 1200 machines at Glasgow and 300 machines at Newcastle and Cambridge and a CDC 7600 at Manchester.

Candidates should have considerable background in scientific computing, ideally experience in COBOL, FORTRAN, BASIC, PASCAL, CTR, Fortran 77 and various subroutines.

The successful candidate will have a statistical background and will advise clients in the use of statistical packages such as SPSS, SAS, BMD, GLIM, CLUSTAN, etc. as well as basic statistical techniques.

Applications from both men and women are welcome. Please apply to: Mr. G. J. Smith, Director of Personnel, Datron Plastics Ltd., 206 George Street, Edinburgh, EH2 4LT, Scotland. Tel: 031-226 5381. Closing date: 16th February 1979.

Applications from both men and women are welcome. Please apply to: Mr. G. J. Smith, Director of Personnel, Datron Plastics Ltd., 206 George Street, Edinburgh, EH2 4LT, Scotland. Tel: 031-226 5381. Closing date: 16th February 1979.

## THE UNIVERSITY OF

# Computer Professionals International Banking Systems

## Systems Support Programmers

Salary to £6200 plus up to 15% bonus.  
We require experienced systems support programmers to assume responsibility for supporting, enhancing and controlling our production systems. The major programming language is PL/I, but we would consider people experienced in other languages for re-training. A knowledge of banking systems, especially in the areas of Facilities and Commercial Loans, will be a distinct advantage.

## Data General Programmer

Salary to £6200 plus up to 15% bonus.  
We require an experienced data general programmer with COBOL, and if possible some Assembler experience to work on the development of a sophisticated FOREIGN EXCHANGE DEALERS DISPLAY SYSTEM. You will be the senior in-house applications programmer on the project and will be expected to take overall responsibility for supporting the production system, as well as playing a key role in its development and enhancement.

## Systems Analyst

Salary to £6200 plus up to 15% bonus.  
We require an experienced systems analyst, preferably with some banking knowledge, who, depending on the qualifications of the selected candidate, will work either on the development of new banking systems or on reviewing the quality and adherence to standards of these systems.

**Morgan Guaranty**  
Trust Company of New York

## KUWAIT UNIVERSITY VACANCIES FOR COMPUTER STAFF

### GENERAL REQUIREMENTS:

- 1 Direct the design and justification of computer based systems that will meet the needs of the University.
- 2 Review the progress of jobs in production.
- 3 Set up and regularly review operational standards
- 4 Advise the system analysts and determine the interface between jobs split amongst them.
- 5 Applicants should have minimum of three years' experience in ON-LINE applications.
- 6 Priority is given to applicants with experience in University Environments.
- 7 Bids should be sent to:

### DIRECTOR OF COMPUTER CENTER KUWAIT UNIVERSITY

P.O. Box 5488  
KUWAIT  
STATE OF KUWAIT

8. All applications must include POSTAL ADDRESS AND PHONE NUMBERS.

### FIELD SERVICE ENGINEER

New Career  
(Plus Quality Car Choice + Free BUPA + Relocation)

Start £6,500  
One of the world's leading micro computer manufacturers currently enjoying an annual growth rate of 40% is about to launch its own service group. This new venture could be your opportunity to join a dynamic company, gain experience in a wide range of industrial and applications with prestige products. Start at £6,500, plus £4,600 towards the car of your choice plus many other benefits. If you are a service/customer engineer with good academic background /computer experience, live in London or Home Counties, then take a big stride to an exciting new career with excellent future prospects by calling today. — but hurry!

Consultant's Ref: EK2137

AB EXECUTIVE (KINGSTON) LTD. 01-546 9473

### CONTRACTS

19. Capital Appts.  
PORTMAN  
Programmers urgently required for Industrial and Development Projects throughout the UK.  
ALL AREAS  
Phone for free leaflet:  
537 5557 day, 636 9559 eve

## Programmer/Analyst

£5,000+

Applications are invited from both men and women having three years experience of programming in COBOL. Experience of PLAN would also be useful as would experience in Systems Analysis work although appropriate training will be given in this field.

The vacancy exists in the Systems and Data Processing Department based at our Head Office in Gloucester where current systems are run on an ICL 19031 128K VDU's based on ICL 7502's and a variety of Nixdorf mini-computers. By the end of 1979 this hardware will have been replaced by a ICL 2960 under DME with EDS 100's.

The post carries a commencing salary in excess of £5,000 per annum, and applicants, who should be self-motivated and willing to tackle tasks without day-to-day control, will have ample opportunity to develop from this level in a challenging environment.

The company is a member of the Unilever Group, and conditions of employment, therefore, are consistent with those of a large, progressive organisation.

Please write (or telephone Gloucester 21521 Extension 2174) in the first instance for application form quoting reference no. 79/01 to:

Personnel Manager (Administration), T. Wall & Sons (Ice Cream) Limited,

All applications will be acknowledged.



### SHORT TERM CONTRACT OPPORTUNITIES!

### SYSTEMS ANALYSTS/ PROGRAMMERS/OPERATORS VARIOUS MACHINES AND LANGUAGES AREA — SCOTLAND

Availability — Full or Part Time

Apply, with details of experience, to:  
H. G. USHER & CO. LTD.  
3 WALKER STREET, EDINBURGH EH8 7JY  
TEL: 031-226 5947/8633

### IMPERIAL CANCER RESEARCH FUND COMPUTER PROGRAMMER

Required to assist a team of scientists undertaking research in medical genetics. Initial responsibility will be the development of programs for the analysis of biomedical, clinical and experimental data. At least two years' experience of Fortran programming is essential and the handling of large scale data files would be an advantage.

Salary range £3936 to £5266.

For further information and application form telephone or write to Miss S. M. Hurley, Imperial Cancer Research Fund, Lincoln's Inn Fields, London, WC2, on 01-242 0200 ext. 305.

### FIELD SERVICE ENGINEERS

SHEFFRA GRAPHICS, a growing company with a big future in the Graphic Arts Industry, require Field Service Engineers to service computerised phototypesetting systems throughout the UK. A Company car is provided and there will be opportunity for international travel. Applicants should have experience of computer controlled systems, floppy or rigid disks, visual display terminals etc. at home with basic machine language and software diagnostic codes. The position will be based from our office in SLOUGH.

Apply in writing or phone SLOUGH 38779/0  
Bob Allen — Service Manager

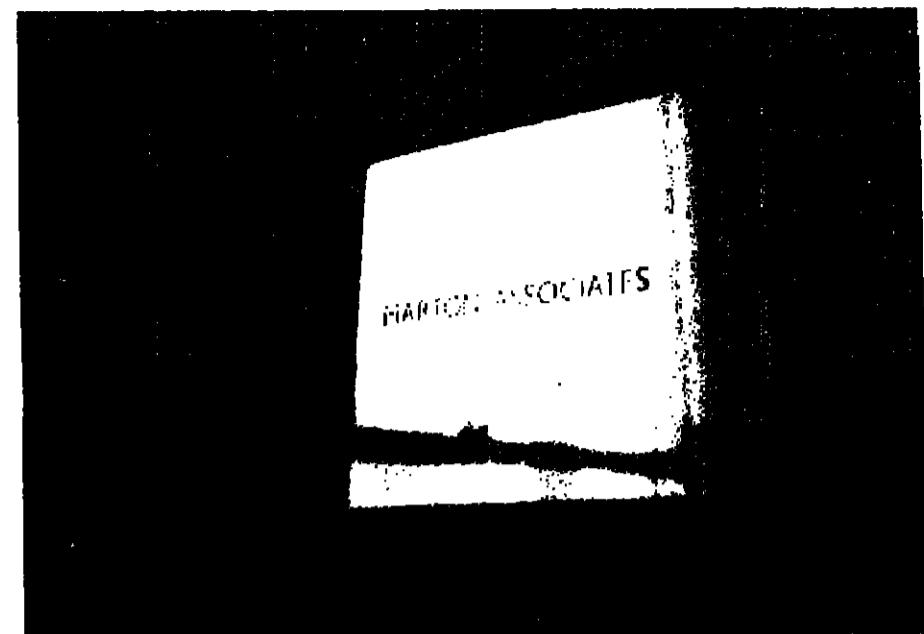
Sheffra Graphics Limited  
283 Fernham Road, SLOUGH,  
Berks SL2 1HA

COMPUTER PERSONNEL APPOINTMENTS LTD  
Computer Specialists and Consultants  
D.P. MANAGERS, SYSTEMS ANALYSTS,  
PROGRAMMERS AND  
OPERATORS

Midlands, Northern Counties and Scotland  
For application forms apply to:  
66 New Street, Birmingham B2 4DU, 021-238 7251  
or Tel. 01-328 7251

## MARTON ASSOCIATES OF TRAfalgar SQUARE

Specialists in the complexities of today's recruitment market. Our selection staff have first hand experience in management sales and all aspects of the computer industry.



### AREA SALES MANAGERS

Our Client, a leading manufacturer of distributed mini computer systems is expanding so successfully that several vacancies are occurring for Area Sales Managers. Responsibilities include obtaining new multiple sales from large companies who are IBM based or who seek a stand alone network. Early promotion will extend to team management throughout the U.K. 2010 c.c. Contina Gma, BUPA, Company Insurance, Pension Fund and relocation expenses. You will already be successful with 3-5 years' mini/mainframe experience. Knowledge of IBM and compatibles useful. Must have strong power to negotiate large contracts. Must present a smart image and project well with Senior Management. £100.

### THROUGHOUT UK

£20,000+

### SENIOR SYSTEMS ANALYSTS

### NORTH LONDON

£7,200+

A major banking organization in North London who have installed 2960's seek several candidates with at least 3 years' experience, some preferably on line. Successful applicants will enjoy the challenge of developing on line projects with user contact. Excellent opportunities to move into management positions. Relocation expenses if required, usual large company benefits.

### SERVICE ENGINEER MANAGER

### MILAN, Italy

£10,000+ Profit Share + Car

Due to continued expansion, our Client engaged in the design and manufacture of computerised capital equipment with a group turnover of £40 million has a vacancy for a manager in their Milan office. Italian not necessary. Initially he will be responsible for the installation of sophisticated electronic equipment to industry in the major cities of Italy, and will be required to train and manage his own team. Applications are invited from young candidates under 36 with a degree in Engineering (or equivalent) with some exposure to Computer and Industrial Electronics associated with Process Control. An attractive relocation package is offered coupled with a company car and excellent career prospects into Technical or General Management. C3RD Contact Miss Burke

### OPERATORS

### LEATHERHEAD

to £6,000

A major manufacturer in the heart of Surrey requires two operators (one of senior level) for its on-line IBM installation operated under DOS. The operator will have at least 1 year's experience in DOS and can expect to earn up to £5,000 including shift allowances and overtime. The senior operator will have at least 2½ years' experience (preferably supervisory) and will earn in the region of £6,000. Two shift operation. Good fringe benefits including sports and social club and subsidised restaurant. C490

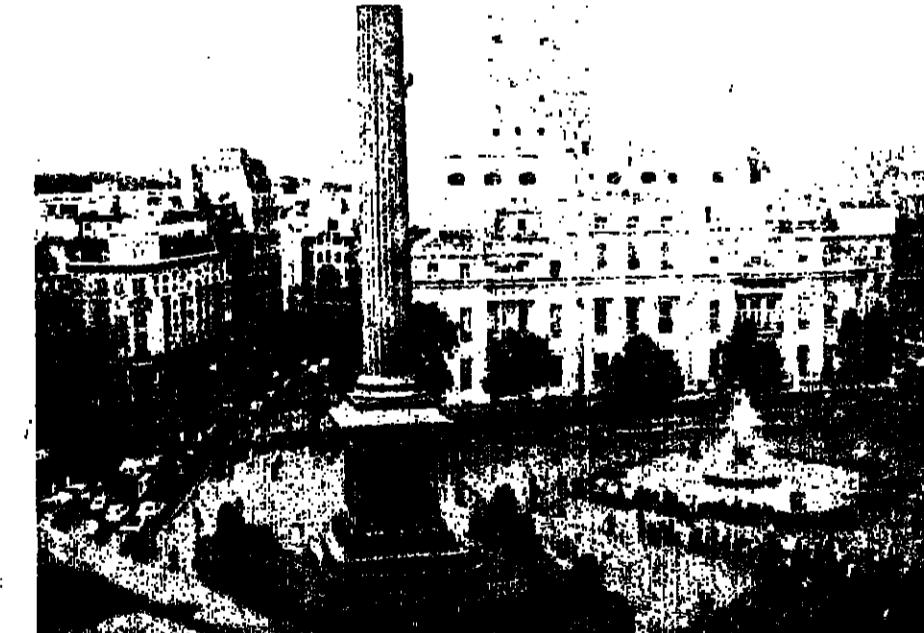
### CONTRACT/PERM S/AS & PROGRAMMERS

### LONDON AND SE

to £10,000

Bockhampton, Birmingham, Borehamwood, Chatham, Croydon, Epsom, Gillingham, Gravesend, Lancing, Oxford, Romford, Tadworth, Uckfield, Watford and throughout London. £500

## WILL HELP YOU GET TO THE TOP



Executive and sales people, Consultants, Analysts, Programmers and Operators both permanent and contract. Service engineers and accountants in computer related fields.

**MARTONassociates**  
FOR PROFESSIONAL PEOPLE AT THE CROSSROADS.  
Suite 628, Grand Buildings, Trafalgar Square, WC2  
01-839 4169, Alternative Lines 839 4689/5107

## SALES EXECUTIVES (TURN-KEY MINI COMPUTER SYSTEMS)

**SALES TERRITORIES  
MIDLANDS & SURROUNDING  
COUNTIES**

**ON QUOTA EARNINGS  
£13,000 P.A. +  
PLUS COMPANY CAR**

Our Clients based in the West Midlands, are a fast growing and well respected supplier of turn-key mini computer systems with a substantial and impressive Client base.

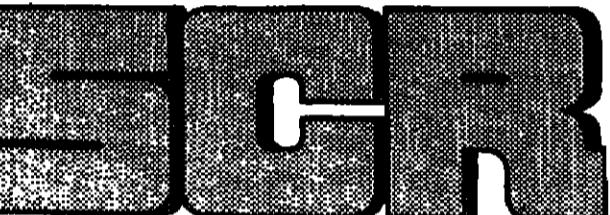
The Company market excellent products in hardware and application package terms, coupled with good technical support resources.

Candidates should have a proven sales record within the mini computer sales field, a sound business understanding and the motivation and determination to succeed.

In return the Company offers a stimulating working environment amongst professionals, realistic and achievable quotas and genuine long term career prospects. For further details and an immediate confidential interview contact.

RICHARD CHAMPION ON: 021-238 3781 (24 HOUR ANSWERING SERVICE)  
OR HAGLEY 4166 (EVENINGS & WEEKENDS)

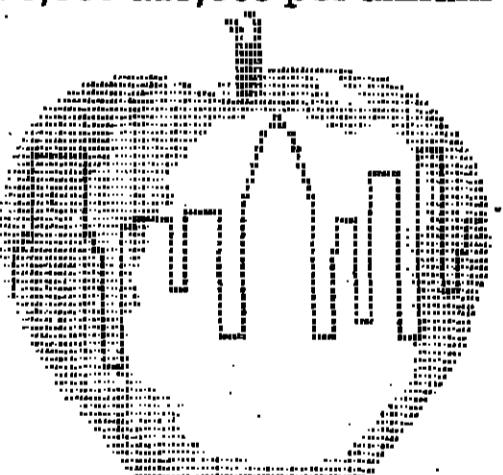
### SPECIALIST COMPUTER RECRUITMENT LIMITED



BIRMINGHAM 021-236 3781  
Freepost, Equity and Law House,  
35-37 Great Charles Street Queensway, Birmingham B3 2BR  
MANCHESTER 061-833 0427  
Freepost, Blackfriars House, The Parsonage, Manchester M3 8BB  
LONDON 01-935 0671  
Freepost 13, 3 Mandeville Place,  
Wigmore Street, London W1M 8LB



**NEW YORK**  
£8,000-£13,000 per annum



New York. The Big Apple. Ripe with opportunities for people in the computer industry. Right now, offering unrivalled experience in the most sophisticated business and financial environment in the world.

Our client, Computer Technicians Incorporated Systems Division, a U.S. based consulting firm, is looking for Programmers and Systems Personnel to join a major U.S. bank, located in the Wall Street area of New York City.

Candidates for these permanent positions must have a knowledge of IBM and/or NCR systems. Vacancies exist for:

**PROGRAMMERS**  
with a minimum of 3 years' experience.

**PROGRAMMER  
ANALYSTS**  
with a minimum of 3 years' experience.

**SYSTEMS ANALYSTS/**  
**PROGRAMMERS**

**SENIOR**

**SYSTEMS ANALYSTS**

If you're应聘, simply telephone 01-937 6241, arrange for interview, or apply in writing, with a full curriculum vitae.



### SYSTEMS ANALYSTS PROGRAMMERS

Due to the continuing expansion within the Systems Department, we have a number of vacancies for Systems Analysts/Programmers for the systems and programming area, and the software and application support sections. The department currently operates:

ICL 1806A under G3  
ICL 2800 under VME/B  
(Using mainly COBOL for commercial applications)

Candidates for the above positions should preferably be fully experienced, but we may be willing to train in some instances, provided academic qualification is to HND/Degree standard.

These are responsible positions offering attractive salaries based on experience. In addition the Corporation offers a Pension and Life Assurance Scheme, Sports and Social facilities and excellent canteen facilities.

Please write or telephone for an application form to:

Employment Officer  
BRITISH AEROSPACE AIRCRAFT GROUP  
Grangefield, Middleton,  
MANCHESTER M24 1SA  
Telephone: 061-681 2020 extension 387

### The Polytechnic of North London

#### HEAD OF COMPUTER UNIT

Applications are invited for the above post which involves responsibility for all functions of the Computer Unit including operation, systems programming, data preparation and advisory services throughout the Polytechnic.

The Computer Unit has a DECsystem-10 computer with a large range of peripherals providing multi-access and batch processing service and has a staff of about 30.

Applicants should be graduates with considerable experience in the hardware and software fields, some of which should be at management level.

Salary Scale: £7827-£8820 (including London Allowance). Application form and further details from Establishment Officer, Polytechnic of North London, Holloway Road, London N7 8DD.

Closing date 16th February, 1979.

P.O. Box 834, Wright Lane,  
Kennington, London WB 5SR.

## Lowndes-Ajax expansion creates rewarding sales opportunities

### CROYDON

#### Mailing & Fulfillment System

This position has been created to capitalize on the company's experience in the above field, by selling a sophisticated mailing system entailing a degree of individual tailoring to large user requirements, in order to gain a major share of this market. The successful applicant may currently be working as a project leader/systems analyst although sales experience would be an asset. Each system could be based on DBMS and RJE so knowledge of these techniques will be useful.

#### Computer Output Microfilm

The purpose of this post is to maintain and further increase the current rate of market penetration. An experienced sales executive with a sound knowledge of COM and Microfilm techniques, together with an on-going interest in this expanding sector of the computer market, is required to sell the service to a wide variety of users.

The successful applicant will be joining an established COM Bureau, already servicing a large number of satisfied customers. He will be backed by an experienced and dedicated support team using advanced equipment.

#### Personnel Information Systems

The company, already considerably experienced in DBMS related systems and all types of telecommunications, is developing a new specialist service aimed at providing an interactive system designed around the System 2000 DBMS operating on large IBM 370's. This development requires a sales executive with experience of DBMS and/or personnel-related systems, preferably in a sales capacity or as a project leader, to assist the Company's advance into custom-built database applications such as the Personnel Information systems market.

#### Lowndes-Ajax Computer Service

Applications  
Payroll and Personnel  
Ledgers and Fixed Assets  
Custom-built Systems  
Manufacturing Systems  
Financial and Insurance Systems

Facilities  
C.O.M.  
Data Preparation  
Remote Batch Computing  
Interactive Computing  
System 2000 DBMS  
Simplan Corporate Modelling

A Member of the Hart Samner Group - Founder Member IBSA

### WARRINGTON

#### Financial Accounting Systems

A knowledge of Payroll and Ledgers with ability to negotiate at a senior level, is required for this post. A background in E.D.P., preferably with IBM mainframes is desirable. An interest in Database and remote computing would be an advantage. The successful applicant will be required to use initiative and to work without close supervision.

#### Remuneration

All these positions carry a basic salary of over £6,000 and commission package producing earnings of £8,500 based on very realistic quotas. Rewards considerably in excess of £10,000 are currently being earned as a result of above quota performances.

#### Job Structure

Successful applicants will join a sales team structured on an hierarchical basis offering excellent opportunities for advancement to leadership status.

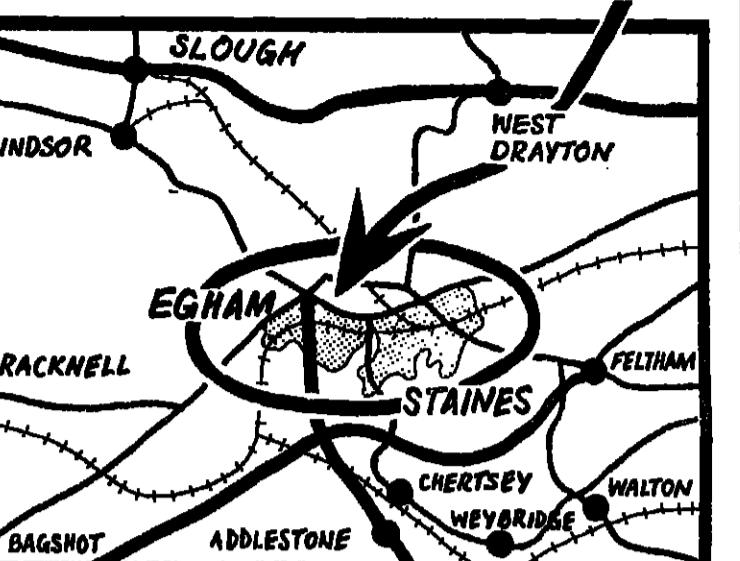
#### Fringe Benefits

Each post includes a company car plus other exceptional benefits such as mortgage subsidy, B.U.P.A., pension scheme and membership of an excellent sports and social club.

Applicants for these posts should in the first instance write with full C.V., or telephone

Mrs. Liz Hilton,  
Lowndes-Ajax  
Computer Service Limited,  
Milton House, Milton Road,  
Croydon, CR9 2XG.  
Tel: 01-689 2244.

## LIKE TO WORK HERE?



If Staines/Egham is an easy place for you to get to, you could well be interested in one of the current openings with our clients — a busy, lively Company engaged in the manufacture and assembly of electronic components. With the support of a new top management team, a number of accounting and manufacturing systems are being developed, using ICL 2904 and on-line facilities in the administrative offices. The installation is conveniently situated close to shops, banks, etc., and relocation assistance will be given where applicable. Our clients are committed to the development of skills by a planned schedule of training.

#### SENIOR ANALYSTS £6500-£8000

These posts will interest practical, well-organized people who are happy working in a manufacturing environment. There are opportunities to take project responsibility, including team leadership, in the fields of finance and production. (Ref. 972)

#### O&M ANALYST

This is a new appointment, and the successful candidate (who will be the first O&M practitioner in the Company) will have plenty of scope to design and implement improved methods. A sound O&M background is required, with some supervisory experience, since there is the potential to build a small team in the near future. (Ref. 978)

#### C. £6500

**PROGRAMMER C. £5500**  
This opening will interest a practical, effective programmer, with CORAL and/or PDP11 experience (preferably ICL). As a member of a small team in addition to being involved in new application (including on-line systems) you will have the opportunity to further your technical experience. (Ref. 977)

#### PROGRAMMER

This opening will interest a practical, effective programmer, with CORAL and/or PDP11 experience (preferably ICL). As a member of a small team in addition to being involved in new application (including on-line systems) you will have the opportunity to further your technical experience. (Ref. 977)

Please ring us for a confidential talk, quoting the appropriate reference, or leave a message on our answering machine after hours and we'll contact you. Initial interviews will be held either at our offices or in your home area.

**EDP SYSTEMS 01.637 5796**  
52-53 Margaret St. London W1N 7FF

#### IBM Programming Experience?

## Programmer/ Analyst

ICI's Pharmaceuticals Division is looking for a young man or woman with at least 2 years' programming experience using IBM 360/370.

Comprising analysis, programmers and a data control function, the section is responsible for systems analysis, design and programming and production of divisional management accounting information. As a programmer/analyst you would be responsible both for development work and the operation and maintenance of current systems, with good scope for career development.

Aged around 22/32 with a university degree or equivalent, you will need a good knowledge of PL/I. Experience with on-line systems would be an advantage.

The Division is situated in a delightful and easily accessible part of the Cheshire countryside. A remuneration package of around £6,000 would be offered to the successful candidate and other benefits, including relocation expenses, sports and social clubs are excellent.

For information and an application form, ring Kate Hudson on Alderley Edge 582828 or write to her at:



Personnel Department,  
ICI Ltd.,  
Pharmaceuticals Division,  
Alderley House,  
Alderley Park,  
Macclesfield, Cheshire.

## Recruitment



in Informatics

## Burroughs Programmers & Analysts Belgium and Netherlands

**Salaries: £12K-£15K**

An Important Financial and Banking Institution based in the Benelux and having one installation in the Netherlands and its Head-Quarters in Belgium requires PROGRAMMERS and ANALYSTS to join its Development Teams in Spring, 1979. Both installations run BURROUGHS mainframe hardware and consequently it is a pre-requisite to offer current expertise on that company's medium and large scale equipment either in a Programming or Analytical/Designing capacity. These opportunities represent an outstanding opportunity

## Coral 66 Programmers Hertfordshire or Central London

**Salary: £6K-£8.5K**

One of the U.K.'s foremost Hardware Design and Software Supply Companies urgently requires additional team members for one of its prestige projects. Whilst previous hardware experience is not relevant it is essential that applicants are fully conversant with CORAL 66 and preferably either Mini/Micro Assembler or mainframe FORTRAN. Those who have experience in the development of systems and software, compilers and operating systems are of special importance, whilst for other

## Snr/Jnr Mini/Micro Specialists Denmark

**Salaries: £9K-£15K**

Our client is a major International Systems and Software Development Group recognised as Market Leaders in its field. Owing to continued expansion in a wide variety of applications areas including Data Communications, Message Switching, Computer Networking and Mini Computer Software, a significant number of experienced permanent personnel are urgently required. Emphasis will be placed on technical achievement and in-depth experience in the areas of activity outlined above. Whilst a degree or equivalent qualification in either Computer Science or Mathematics is desirable, significant relevant experience will be considered in lieu.

## Database and TP Specialists Belgium and Thames Valley

**Salaries: Europe c. £16K UK c. £10K**

One of the World's foremost Software Suppliers of US origin has requested Logistix to identify top calibre T.P. and/or Database Analysts, Designers and Software/Applications Programmers up to and beyond Team Leader level for permanent career based positions to the West and North of London or immediately at the company's European Head-Quarters in Belgium.

Suitable applicants must have current on-line (T.P.) or Database applications or systems programming experience using PL/I, COBOL or BAL. It is anticipated that candidates will have worked with on-line or D.B. applications for 2 years or longer. Applications cover on-line enquiry systems, sales

etc.

**Systems Development (Pre and Post Sales)  
Central London and Thames Valley**

**Salary to £10K + cat**

will be given opportunities to act in pre/post sales environment. The company offers an outstanding portfolio of company benefits including a minimum of 4 weeks holiday allowance. Group medical insurance and life assurance are already in operation whilst more senior staff are eligible for an annual bonus (currently assessed at 10% of salary). Full removal assistance is available where appropriate. Local interviews in Greater Manchester, Central London and Reading will be arranged to suit requirements.

**Logistix, Freepost 32, London W1E 3YZ**

Licenced by D.O.E.  
Licence No. SL (A)2887

01-591 5634



Telex: 28800

# MYRIAD

## DATA COMMUNICATIONS SALES South of England

With the increasing trend toward distributed processing and satellite computing facilities, data communications is now one of the foremost growth areas within the established reputation for technical sophistication coupled with the flexibility to provide users with a "total-solution" to communications requirements. To cope with the ever increasing demand for their products, the company is currently expanding its sales team and is able to offer a number of exceptional opportunities for both Field Sales and Internal Sales personnel.

### FIELD SALES

The ideal candidate will have previous experience of selling data communications equipment. However, a sales background in any relevant field will certainly prove useful since extensive product training will be provided as will technical support in the field. A good basic salary is offered plus a generous commission scheme, bonus, and company car. Commission will be guaranteed for an initial period and the first year quota earnings are circa £8000, which one may confidently expect to exceed.

The company headquarters are based in Berkshire and currently vacancies exist in territories throughout the South of England. In a major organisation, where sales have developed rapidly in recent years, the persons appointed can look forward to a dynamic and challenging future where career opportunities are unlimited.

**MYRIAD APPOINTMENTS LIMITED**  
30 Fleet Street London EC4Y 1AA  
01-353 0981 24 HRS.

Rec. SW1 / 2501

### OPERATOR and SENIOR OPERATOR

— Central London Mini-Computers

Salary ranges  
Senior Operator £3,600-£3,800  
Operator £3,250-£3,450

London Transport has vacancies for an Operator and a Senior Operator for its 2904 Mini-Computers.

These machines are:

\* Involved in a variety of applications including File Enquiry, DDE, Batch Processing and RJE to mainframe computers.

\* Located in the St. James's Park and Paddington areas

\* Normally operated in three 8 hour shifts covering the period 0715-2000.

Applicants should have some experience of computer operating, and for the senior position at least 18 months' experience is needed, part of which will ideally have been in a supervisory capacity.

There are several attractive fringe benefits, including FREE TRAVEL AT ALL TIMES ON LONDON TRANSPORT SERVICES.

Write for an application form, quoting ref. 864/C to Staff Appointments and Development Officer, London Transport, 85 Broadway, London SW1H 0BD, or phone 01-222 5800 ext. 633.

**LONDON  
TRANSPORT**

### PROGRAMMING WITHIN EUROPE

We are DP Management Consultants advising large manufacturing and retail outlet concerns in Holland. Our clients have asked us to establish Project Teams for them. For this purpose we require:

ICL 1800-2050; Systems Programmer with relevant expertise (not just experience) in Group 2+ VME/K/ICL data communications and IBM 360-370. Systems Programmer of above caliber but in relation to DOS and OS/VS terminals SV1 and SV2 terminals concept.

Applications: Programmer; experience 5 or more years in Cobol and/or assembler, preferable, but not necessarily of IBM/ICL mainframe.

These positions are offered on a contract or permanent basis with us, subject to mutual agreement. In return for expertise and dedicated work we offer promotion/salary prospects compatible with a newly founded partnership.

Please write or telephone me direct, quoting ref. 864/C to Staff Appointments and Development Officer, London Transport, 85 Broadway, London SW1H 0BD, or phone 01-222 5800 ext. 633.

### BLACKWOOD ASSOCIATES PROGRAMMER R.P.G.11 BIRMINGHAM To £5,000+

This major IBM Systems 3 installation requires a competent RPG 11 Programmer. Experience of TP systems would be an advantage but is not essential.

An exciting range of projects involves On-Line and Batch systems for a number of users within the Group throughout the U.K.

An excellent salary and fringe benefits are offered to candidates having appropriate experience.

Job Ref. 4/173

GP House, 155 Handsworth Road, Handsworth Birmingham B20 2RL  
Telephone: 021-523 4520 (24 Hours) or 021-551 2357  
Phone or write (no stamp required) to:  
Blackwood Associates, FREEPOST,  
Birmingham B20 1BR  
All opportunities open to male and female applicants.  
Registered under the Employment Agencies Act  
1973 — Reg. No. M93.

### CLASSIFIED COPY

All classified copy should reach our offices no later than 8.30 p.m. on the Monday preceding Thursday's publication. If complete artwork is supplied 12 noon on a Tuesday.

Ring David Abbey for further details on 01-261 8016.

CONTROL DATA  
EDUCATION SERVICES DIVISION

# SENIOR SALES EXECUTIVE

"COULD YOU SELL A  
SOCIAL REVOLUTION?"

PLATO is a computer-based system which is revolutionising the effectiveness and delivery of education and training. Its applications are already as diverse as the teaching of numeracy to deprived children and the training of airline pilots.

In the United Kingdom its rapidly growing client base includes industrial, commercial and government users, and allied activities include extensive involvement in the Manpower Services Commission TOPS scheme.

WE ARE SEEKING A SENIOR SALES EXECUTIVE WITH A PROVEN RECORD OF SALES SUCCESS, PREFERABLY IN COMPUTER OR EDUCATION SERVICES, TO BE RESPONSIBLE FOR SELLING PLATO THROUGHOUT THE U.K.

High intelligence is a fundamental prerequisite and a degree in a scientific or social subject or in education would be a significant advantage. The wide range of opportunities presented by this unique position can only be fully explored by a person with a creative and flexible mind, a thoroughly results orientated approach to business, the personal stature to negotiate at the highest level and clear potential for rapid advancement into management.

The job will be based in CENTRAL LONDON and annual on-target earnings will be in excess of —

**£10,000 + COMPANY CAR**

and a variety of fringe benefits.

SMR Sales and Marketing Recruiters Ltd.,  
Victory House, 99 Regent Street, London W1R 7HB. Telephone: 01-734 9776.

Please supply complete career details and quote reference CDP019 when applying.

**GD**  
CONTROL  
DATA

MORE THAN A COMPUTER COMPANY

Magnetic Media Manufacturing Division

### SALES ENGINEER COMPUTER SERVICES

Applicants are invited to fill this new position created as a result of our further expansion. We are looking for someone who has already gained experience in selling in the Computer Services Sector and wishes to join a successful international group whose activities are totally related to selling third party computer hardware maintenance to manufacturers O.E.M.s and End Users.

The successful applicant will join a small but dedicated team operating from our Head Office in Feltham, Middlesex and must be willing to travel throughout the U.K. and occasionally overseas.

An attractive salary will be negotiated and a contributory Pension Fund is in operation. A Company car will be supplied for your full time use.

Please write giving full details of your career to date marking your application Private and Confidential to:

The European Marketing Manager,  
Systems Maintenance and Services Limited,  
P.O. Box 13,  
Unitite Centre,  
Great South West Road,  
Middlesex, TW14 8NT

**datascene international**

### CONTRACTS PROGRAMMERS & ANALYSTS

REGISTER NOW FOR IMMEDIATE & FORTHCOMING REQUIREMENTS THROUGHOUT

**LONDON ★ U.K. ★ EUROPE**

DUE TO OUR CONTINUALLY CHANGING REQUIREMENTS WE ARE ALWAYS INTERESTED IN HEARING FROM COMPUTER PROFESSIONALS WITH A SOLID D.P. BACKGROUND TO WORK WITH MAJOR CLIENTS WHO ARE ALWAYS ABLE TO OFFER A WIDE VARIETY OF INTERESTING & CHALLENGING REQUIREMENTS.

REMEMBER: WE PROVIDE TOP CONTRACTS WE PAY TOP RATES

CALL **BOB EDWARDS** TODAY

Datascene International Ltd. 01-439 1356  
Sceptre House, 169-173 Regent Street, London W1R 7EG  
(01) 439 1356 (24 hours answerphone)

Central Public Health Laboratory  
National Collection of Type  
Cultures (N.C.T.C.)

### SYSTEMS DESIGNER/ PROGRAMMER

A systems designer/programmer, preferably with a scientific background, is required for the production of a historical information system. Basic skills in logical design, as identified by practical experience, are required. The system will be used to computerise stored data bases. Systems uses Optical Disc Reader forms. Data Recognition (Dataform) 3.0, and the system will be interfaced to the ICLCS time sharing system, current software in FORTRAN IV. There is a need to demonstrate an understanding of the requirements of the system and the efficient storage and retrieval of data and its visual presentation. An appreciation of the use of symbolic logic and supervisory would be given for specialised functions required.

Existing departmental spans, transfer and/or moves in appropriate subjects and experience.

Salary scales: Scientific Probationary scale £2,891-£4,275. London Weight scale £1,708-£2,890. London Weight or Senior Scientific Scale if applicable £3,281-£6,814. London Weight scale £2,891-£4,275. London Weight scale £1,493-£2,628. London Weighting scale £1,493-£2,628.

Post 01-205 7141 (for more details). Applications to: Mr. J. Hall, on Form 102, to the Personnel Officer, Central Public Health Laboratory, Colindale Avenue, Colindale, London NW9 5DU, quoting Reference 01-205 7141. Closing Date: 14 February 1979.

UNIVERSITY OF  
EDINBURGH

### COMPUTER OPERATOR

Required for the position of Computer Operator at the University of Edinburgh, Department of Mathematics, 198 High Street, Edinburgh EH8 9AA. Applications should have at least one year's experience in a computer operator's role, and be able to demonstrate knowledge of the use of computers. Experience of data processing and data analysis is desirable. Applications should be sent to: Mrs. G. M. Smith, Department of Mathematics, University of Edinburgh, 198 High Street, Edinburgh EH8 9AA. Closing Date: 14 February 1979.

UNIVERSITY OF  
BRADFORD  
COMPUTER  
OFFICER

Required for the position of Computer Officer at the University of Bradford, Department of Mathematics, 198 High Street, Bradford BD9 4JL. Applications should have at least one year's experience in a computer operator's role, and be able to demonstrate knowledge of the use of computers. Experience of data processing and data analysis is desirable. Applications should be sent to: Mrs. G. M. Smith, Department of Mathematics, University of Bradford, 198 High Street, Bradford BD9 4JL. Closing Date: 14 February 1979.

It is therefore essential that the salesman decides which facilities are of interest to the client, well before the event, and concentrates upon those.

The organisation of a demonstration needs as much planning and consideration as a second Day.

First, the overall administration. Where will the demo be held — existing client, own office? Can the machine be available? Can the client make it on that day? Who will be attending on the prospect's behalf? Who will be needed on the salesman's side? Will refreshments be required — coffee, lunch? Does the client need to be met or collected? What relevant literature will be required — equipment, software, proposal?

Then the product itself. It must be the one on which the prospect is about to make a buying decision, which in turn is the one he is expecting to see, not a bigger one, or a smaller one, or one with different features. This must be established well in advance. The demonstration should be practised not only well before the event but also immediately prior to the live run, in order to cater for any last minute equipment failures.

If the salesman needs to call on assistance from technical staff, they should be involved right from the outset.

The demonstration itself should be structured, starting from one relevant feature to another, with a natural pause at each stage to agree the related benefit.

The salesmen must be in control of the demonstration throughout whether he or a technician

**Puzzle Answer**

ADDING the ten readings together, and then dividing by four, gives a combined voltage total of 240. Now, since all voltages are known to be different, the two smallest (A and B) must add up to 87, and the two largest (D and E) to 104.

Therefore the other voltage, which can be called C, must equal 80 - 87 = 13. The two middle voltages (C and F) must add up to 104 - 13 = 91. This adds quickly to 145.

Thus the two middle voltages (C and F) must add up to 145. Since the two largest voltages (D and E) add up to 104, the two smallest (A and B) must add up to 145 - 104 = 41.

Thus the two smallest voltages (A and B) must add up to 41.

Thus the two largest voltages (D and E) must add up to 104.

Thus the two middle voltages (C and F) must add up to 91.

Thus the two smallest voltages (A and B) must add up to 41.

Thus the two largest voltages (D and E) must add up to 104.

Thus the two middle voltages (C and F) must add up to 91.

Thus the two smallest voltages (A and B) must add up to 41.

**NEW ZEALAND**

The Computer Services Division of the New Zealand State Services Commission has the following vacancies for EDP staff experienced in developing and maintaining mainframe, large scale computer and data communications networks.

**SENIOR SYSTEMS PROGRAMMERS / SYSTEMS PROGRAMMERS**  
(Salaries up to NZ \$14,500)**SHIFT SUPERVISORS**  
(Salaries up to NZ \$13,000)**SENIOR OPERATORS**  
(Salaries up to NZ \$11,500)

Positions are available at:

Wellington — Both the Prittle and Cumberland Computer Centres are situated in central Wellington.

The Prittle centre operates dual Burroughs B 4700 supporting a nationwide network of Hewlett Packard terminals.

The Cumberland Centre operates an IBM 186 running under AWT-JTS 2. Many networks are under development using both TSO and IMS. A demanding environment exists with a large user base across a variety of Government departments.

Upper Hutt — The Tranzit Computer Centre is situated 20 miles north of Wellington and operates an ICL 2980 supporting a network of smaller computers and terminals.

Wanganui — (West Coast North Island) — if you feel like a change from the large city environment this centre offers a large transaction processing system operating UNIVAC 1110 (3 x 2) under EXEC 005 with TIP, MDS and CMS.

Assistance will be provided to staff recruited in U.K. to move their family and household effects to New Zealand.

The System Manager of the Division's Cumberland Computer Centre, Mr Roger Mylles, will be conducting interviews in London in March 1979 in conjunction with a New Zealand Immigration Officer.

Applications and other information can be obtained from The Chief Migration Officer, New Zealand House, Grosvenor, London SW1Y 8TQ. You should quote reference Jan. 2/338/6.

**LANCESTER POLYTECHNIC**

Coventry

**COMPUTER CENTRE**

Due to expansion of the Computer Centre and in order to prepare for the replacement of the current ICL 19035 computer there are vacancies for:

**3 Chief Programmers**£527-E6342 or £6060-E6702  
or  
£6513-E7230

THE JOB: — These three posts are the most senior programming appointments in the Computer Centre and between them, they will be responsible for the work of over a dozen programmers.

REQUIRED: — At least five years post graduate experience with demonstrable achievements including project management and to have high educational and professional qualifications.

For application form and job specification please apply in writing enclosing a foolscap stamped and addressed envelope to the Personnel Officer, Lanchester Polytechnic, Priory Street, Coventry CV1 5FB returnable by 9th February, 1979.

**RIVA**  
**BOLTON**  
**SENIOR PROGRAMMERS / ANALYSTS to £7000****PROGRAMMERS to £5000**

(Plus relocation assistance)

Riva is a rapidly expanding Systems House specialising in all types of minicomputer systems, from large COBOL/Database commercial systems to mini/micro interface construction.

We would like to meet programmers and analysts with a professional approach who want to get to the forefront of systems development.

Minimum requirement — 1 year on-line experience. Languages — COBOL, FORTRAN, BASIC, Assembler. Location — BOLTON. Within easy reach of most of Manchester and South Lancashire.

Please ring: MARION PEARSON

on BOLTON (0204) 384112

or write to:

RIVA TURNKEY COMPUTER SYSTEMS LTD.  
Caroline House, 128 Brasenosegate,  
Bolton BL2 1EA

# Free and easy job hunting from your armchair!

The 'footlogging' search for a new job is over!

Thanks to 'Computerjob' — work opportunities are as close to you as your phone!

Simply ring the number below, supply our receptionist with a few relevant details — type of work required, salary and area — together with any qualifications or previous experience. These will then be immediately fed into our computer and crosschecked with 1000's of jobs registered by prospective employers.

Within seconds, depending on availability, we will give you up to 6 suitable vacancies over the phone.

So whatever trade, business or profession you are interested in, ring us between 9.30 am and 5.30 pm Monday to Friday. You've got nothing to lose — it won't cost you a penny — and we could show you a better way of life.

## Computerjob

**01-4081611**

### ANALYST PROGRAMMERS

**MANCHESTER**  
**£5,000 to £6,500+****THE JOB**

- Member in a team developing commercial and communication systems for microprocessors
- Opportunities for travel to Europe, Australia and America

**THE QUALIFICATIONS**

- 2 years' in commercial small systems
- Some Assembler preferred
- Current Driving Licence an advantage

Please send C.V. or phone Oliver Cahn.



Statham House  
Telbot Road  
Stretford  
MANCHESTER M32 0FP  
Tel: 061-872 8671  
Telex: 667518

SOFTWARE SERVICES LTD.

## CLASSIFIED COPY

All classified copy should reach our offices no later than 5.30 p.m. on the Monday preceding Thursday's publication. If complete artwork is supplied 12 noon on a Tuesday.

Ring David Abbey for further details on 01-261 8016.

**OPERATORS**

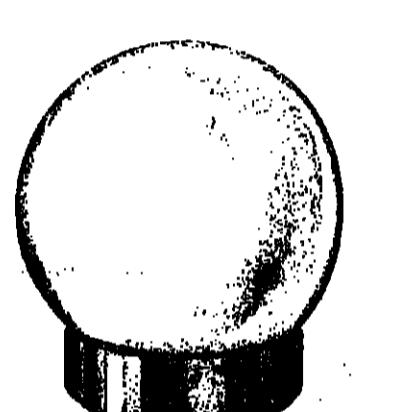
IBM OS	£5800
2 yrs. Experience required plus good ICL knowledge for the ICL 19035	
IBM OS	£5700
2 yrs. Experience required plus a minimum of 3 yrs. experience for the ICL 19035	
IBM DOS	£4000
This leisure company in Surrey requires operators with 1 yr. experience	
IBM DOS	£5000
Sr. Operator required for this. Pays only W. London site. Good prospects	
IBM SYS 3	£4600
Financial institution requires an operator with 6 months' experience	
ICL 2900	£4700
Operator required for company moving to Bucks. 1 to 2 yrs 19035 exp. Good prospects	
ICL 2900	£4300
Company in W. London requires operators with 12-18 months' experience some CII required. Good prospects	
ICL 1900	£4300
Operator with 2 yrs. CII experience required for a site in Essex. 2 yrs exp. only	
PDP DEC 10	£4300
Minimum of 6 months' experience required for this C. London site.	
UNIVAC	£4800
Operator/Sr. Operator required for the W. London company. Excellent prospects	

DATA CONTROLLER SPECIALIST

All areas £3000-£6000

**TARGA COMPUTER DIVISION**3 LIVERPOOL STREET  
LONDON, EC2M 7HN

01-283 2751

**A New Year and Resolutions**

Make a Resolution to come to Square One's Open Evening

If you are a Programmer or an Analyst with a sound commercial background and are looking for a more challenging career, make a note to your diary to come along and have a beer and a chat about what we can offer someone like you.

Monday, 29th January is the date, 4.30 pm-8 pm Is the time and 180 Regent Street, London W1. Is the place.

Don't miss it. Square One is a great company to work with.



Norfolk County Council

**Norwich City College of Further & Higher Education****LECTURER I in COMPUTING & D.P.  
also  
LECTURER I in MATHEMATICS**

Two graduates required from 1st April for general teaching duties up to HNC/HND level but specialist knowledge in particular field would be an added advantage.

Post MCS1: Computing and Data Processing including COBOL, Fortran, Basic, Assembler, etc.

Post MCS2: Mathematics, ideally with some experience of computing at a lower level.

Salary will be in accordance with the Burnham Further Education Report — Lecturer I: £3,182-£5,034.

Application forms and further particulars may be obtained by sending a large stamped addressed envelope to the Head of Department, Norwich City College of Further &amp; Higher Education, Ipswich Road, Norwich NR1 2JU.

Completed forms should be returned within 14 days of appearance of this advertisement.

**PROGRAMMERS**

MANCHESTER

**THE DEPARTMENT**

The Computer Installation is situated in Stretford in modern office accommodation, housing an ICL 1902T, 84K Machine with 4 EDS 60's, 4 MT and communications equipment.

The current work of the Data Processing Department includes a wide range of commercial, financial and statistical applications. The on-line interrogation system is being enhanced and other new projects are planned.

**THE PERSON**

We are looking for an experienced Programmer who has been responsible for at least one system from feasibility study through to implementation.

Candidates must be familiar with Disc Processing and preferably ICL Software.

The person appointed must be able to communicate effectively with non-technical staff and senior management. They must also be able to handle the detail problems encountered in the writing of program specifications and the interactions between systems.

**THE REWARDS**

The starting salary is £3873 per annum rising to £4989 per annum (currently under review). There are the usual benefits of working for a progressive organisation, including 5 weeks holiday plus statutory holidays and luncheon vouchers.

Please write for an application form quoting reference DP/9 to the Personnel Manager, Distributive Industry Training Board, McLaren House, Talbot Road, Stretford, Manchester M32 0PP within the next SEVEN days.

**Computer Operators & Trainee Computer Operators**

The Central Electricity Generating Board has a number of vacancies for Computer Operators and Trainee Computer Operators at its Headquarters Computing Centre located at 85 Park Street, London SE1 9DY.

The computing configuration consists of:

- IBM System 370 Model 168K operating under MVT/ASP
- IBM System 370 Model 168/33 operating under MVS/JES
- IBM System 3032 will shortly be installed.

Both Model 168's have access to magnetic disc and tape subsystems and other peripheral devices. The installation also supports a large data transmission network of remote processors and terminals. The central computers are operational seven days a week and are manned by 5 shifts of operating staff.

Applicants for the post of Computer Operator must be over 18 years of age and should possess GCE 'O' levels or equivalent qualifications, together with at least one year's operating experience preferably in a large computer installation.

Consideration will also be given to those without experience for appointment as a Trainee Computer Operator.

The salaries for these positions will be dependent upon experience and will be within one of the following ranges:

COMPUTER OPERATOR	£3721-£4987 per annum inclusive
TRAINEE COMPUTER OPERATOR	£2820-£4081 per annum inclusive

Applications stating full relevant details and present salary to the Group Personnel Officer, C.E.G.B., Sudbury House, 15 Newgate Street, London EC1A 7AU, by 1 February 1979. Quarto Ref. CW/9.

CENTRAL ELECTRICITY GENERATING BOARD, HEADQUARTERS

**CUSTOMER ENGINEERS & SENIOR CUSTOMER ENGINEERS****£5,000 to £8,000 + Car**

Versatec, part of the Xerox Group, is a Californian based company supplying high technology electrostatic computer peripherals for scientific and commercial applications. Continued success requires further expansion of our Engineering Department, we are, therefore, looking for engineers to complement our existing team.

Initially, training will be in the UK but applicants should be prepared to travel to Europe and to our manufacturing facility if required. The jobs, which involve both the installation and maintenance of modern electrostatic graphic sub-systems in the South West and South East, are both challenging and rewarding.

Applicants must be male or female, should be self motivated, and capable of working from home or a local office with the minimum of supervision.

Salaries are above average. Company cars are provided, and an incentive scheme and BUPA membership are amongst the benefits offered. Assistance with relocation will be provided if necessary.

Contact David Goddard for more details.

**VERSATEC**  
A XEROX COMPANY

Versatec, 27/35 London Road, Newbury, Berkshire Telephone: Newbury (0615) 42421

**Systems Group Head**

An experienced SYSTEMS PROGRAMMER is sought to take charge of the Systems Group which maintains and develops internally generated systems, data and technical computer software in the Computing Centre.

The post is recently established in Harrow, Middlesex and is likely to be filled by someone with 5 years experience in a similar role, including 3 years in a management position. The successful applicant will be required to manage a team of 10-12 people and will be involved in the technical development of real-time systems and their communications interfaces.

An appointment will be made in the salary range £3,283-£6,555 (under review) plus £450 London Weighting Grade 1A. Further details and application forms can be obtained from the Personnel Officer, Chancery Court, Chancery Lane, London EC4A 1JL. Tel: 01-580 6463-7376. Informal interview in the Computer Centre can be obtained by appointment with the Secretary of the Computing Centre. Telephone 736 1244 (Fulham Broadway).

**UNIVERSITY OF ESSEX Senior Lecturer / Reader and Lecturers**  
In the Department of Electrical Engineering Science

Applications are invited for the following posts in the above Department, for appointment from 1 October 1979.

One post of Senior Lecturer/Reader (salary scale £17,506-£19,263, under review). Candidates should have a relevant first degree and preferably higher degree, together with experience in some branch of computer engineering or application. Reference AG/64.

Two posts of Lecturer (salary scale £13,883-£17,754, under review). Candidates should have a relevant degree and experience in some branch of modern electronics or telecommunications. Particular vacancies exist for those with expertise in electro-optics or optical transmission, or television systems. Reference AG/62.

Applications (in triplicate), quoting the appropriate reference and including a curriculum vitae and the names and addresses of two referees (three for the senior post), should reach the Registrar (AG), University of Essex, Wivenhoe Park, Colchester CO4 3SQ, from whom further particulars may be obtained, by February 22, 1979.

**CALCOMP****SENIOR COMPUTER OPERATOR**

Oxford and Cambridge Schools Examination Board.

**COMPUTER OFFICER**

The Board has various posts available in administration, teaching and research. Applications are invited for the post of Computer Officer within the Management Services Department of the Authority. Individuals should possess a sound knowledge of computer systems, as well as an understanding of either COBOL or PL/I systems. Knowledge of PDP11 systems would be an advantage.

Applications should be sent to: The Computer Officer, Bridge House, University Computer Officer Grade 2, 13-17 Broad Street, Cambridge CB2